Final Lab Results (Air Water & Soil)

Weanack Land Criteria

Composite Sample ID's

EA-1-12

EA-1-24

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 17J0144

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro, GA 30830	Date Received:	October 4, 2017 17:25
		Date Issued:	November 3, 2017 9:18
		Project Number:	[none]
Submitted To:	Thomas Liesfeld	Purchase Order:	R15434R-12
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria		

Enclosed are the results of analyses for samples received by the laboratory on 10/04/2017 17:25. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

Mandy Mishra
Lab Director/Quality Assurance Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

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by the Virginia Department of Minority Business Enterprise

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 17J0144

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EA-1-12	17J0144-01	Soil	10/04/2017 16:00	10/04/2017 17:25
EA-1-24	17J0144-02	Soil	10/04/2017 16:15	10/04/2017 17:25

Results have been calculated based on dry weight.

4-Methylphenol is equal to and reported as 3/4-Methylphenol.

Analysis for 2,3,7,8 TCDD was subcontracted to Cape Fear Analytical. The subcontracted results are attached at the end of this Certificate of Analysis.

This Certificate of Analysis is being reissued on November 3, 2017 to report Pesicide and SVOC in mg/kg.

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0144

Analytical Results

Sample I.D. EA-1-12 **Laboratory Sample ID:** 17J0144-01

Composite Start-End Date/Time: 10/04/2017 16:00 - 10/04/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010C	<0.505 mg/kg dry		0.505	1	10/06/17 10:30	10/06/17 17:03	CWO
Arsenic	01	SW6010C	**19.1 mg/kg dry**		1.01	1	10/06/17 10:30	10/06/17 17:04	CWO
Barium	01	SW6010C	**31.3 mg/kg dry**		0.505	1	10/06/17 10:30	10/06/17 17:03	CWO
Beryllium	01	SW6010C	<0.202 mg/kg dry		0.202	1	10/06/17 10:30	10/06/17 17:03	CWO
Cadmium	01	SW6010C	**0.648 mg/kg dry**		0.202	1	10/06/17 10:30	10/06/17 17:04	CWO
Cobalt	01	SW6010C	**2.50 mg/kg dry**		0.202	1	10/06/17 10:30	10/06/17 17:04	CWO
Chromium	01	SW6010C	**36.9 mg/kg dry**		0.505	1	10/06/17 10:30	10/06/17 17:03	CWO
Copper	01	SW6010C	**15.5 mg/kg dry**		2.52	1	10/06/17 10:30	10/06/17 17:03	CWO
Iron	01RE1	SW6010C	**7920 mg/kg dry**		252	100	10/06/17 10:30	10/06/17 17:24	CWO
Mercury	01	SW7471B	**0.010 mg/kg dry**		0.008	1	10/12/17 09:50	10/13/17 08:19	RCV
Nickel	01	SW6010C	**5.49 mg/kg dry**		0.505	1	10/06/17 10:30	10/06/17 17:04	CWO
Lead	01	SW6010C	**8.99 mg/kg dry**		0.505	1	10/06/17 10:30	10/06/17 17:04	CWO
Antimony	01	SW6010C	<5.05 mg/kg dry		5.05	1	10/06/17 10:30	10/06/17 17:04	CWO
Selenium	01	SW6010C	<2.52 mg/kg dry		2.52	1	10/06/17 10:30	10/06/17 17:04	CWO
Thallium	01	SW6010C	<2.52 mg/kg dry		2.52	1	10/06/17 10:30	10/06/17 17:04	CWO
Vanadium	01	SW6010C	**11.8 mg/kg dry**		0.505	1	10/06/17 10:30	10/06/17 17:03	CWO
Zinc	01	SW6010C	**11.7 mg/kg dry**		0.505	1	10/06/17 10:30	10/06/17 17:04	CWO
Semivolatile Organic Compounds by GCMS									
1,2,4-Trichlorobenzene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
1,2-Dichlorobenzene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
1,3-Dichlorobenzene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
1,4-Dichlorobenzene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
2,4,5-Trichlorophenol	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
2,4,6-Trichlorophenol	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
2,4-Dichlorophenol	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
2,4-Dimethylphenol	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0144

Analytical Results

Sample I.D. EA-1-12 **Laboratory Sample ID:** 17J0144-01

Composite Start-End Date/Time: 10/04/2017 16:00 - 10/04/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrophenol	01	SW8270D	<0.345 mg/kg dry	C	0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
2,4-Dinitrotoluene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
2,6-Dinitrotoluene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
2-Chlorophenol	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
2-Methylnaphthalene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
3,3'-Dichlorobenzidine	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
3-Nitroaniline	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
4-Chloroaniline	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
4-Nitroaniline	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Acenaphthene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Anthracene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Benzo (a) anthracene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Benzo (a) pyrene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Benzo (b) fluoranthene	01	SW8270D	**0.440 mg/kg dry**		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Benzo (k) fluoranthene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
bis (2-Chloroethoxy) methane	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
bis (2-Chloroethyl) ether	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
bis (2-chloroisopropyl) ether	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
bis (2-Ethylhexyl) phthalate	01	SW8270D	<0.345 mg/kg dry	C	0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Butyl benzyl phthalate	01	SW8270D	<0.345 mg/kg dry	C	0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Chrysene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Dibenz (a,h) anthracene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Diethyl phthalate	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Dimethyl phthalate	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Di-n-butyl phthalate	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Di-n-octyl phthalate	01	SW8270D	<0.345 mg/kg dry	C	0.345	4	10/09/17 09:20	10/09/17 14:41	SKS

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0144

Analytical Results

Sample I.D. EA-1-12 **Laboratory Sample ID:** 17J0144-01

Composite Start-End Date/Time: 10/04/2017 16:00 - 10/04/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluoranthene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Fluorene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Hexachlorobenzene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Hexachlorobutadiene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Hexachlorocyclopentadiene	01	SW8270D	<0.345 mg/kg dry	C	0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Hexachloroethane	01	SW8270D	<0.345 mg/kg dry	C	0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Indeno (1,2,3-cd) pyrene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Isophorone	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
4-Methylphenol	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Naphthalene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Nitrobenzene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
n-Nitrosodi-n-propylamine	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
n-Nitrosodiphenylamine	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
o+m+p-Cresols	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
2-Methylphenol	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
4-Chloro-3-methylphenol	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Pentachlorophenol	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Phenanthrene	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Phenol	01	SW8270D	<0.345 mg/kg dry		0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Pyrene	01	SW8270D	<0.345 mg/kg dry	C	0.345	4	10/09/17 09:20	10/09/17 14:41	SKS
Surr: 2,4,6-Tribromophenol (Surr)	*01*	*SW8270D*	*60.6 %*		*35-125*		*10/09/17 09:20*	*10/09/17 14:41*	*SKS*
Surr: 2-Fluorobiphenyl (Surr)	*01*	*SW8270D*	*76.6 %*		*45-105*		*10/09/17 09:20*	*10/09/17 14:41*	*SKS*
Surr: 2-Fluorophenol (Surr)	*01*	*SW8270D*	*53.7 %*		*35-105*		*10/09/17 09:20*	*10/09/17 14:41*	*SKS*
Surr: Nitrobenzene-d5 (Surr)	*01*	*SW8270D*	*75.2 %*		*35-100*		*10/09/17 09:20*	*10/09/17 14:41*	*SKS*
Surr: Phenol-d5 (Surr)	*01*	*SW8270D*	*70.1 %*		*40-100*		*10/09/17 09:20*	*10/09/17 14:41*	*SKS*
Surr: p-Terphenyl-d14 (Surr)	*01*	*SW8270D*	*48.3 %*		*30-125*		*10/09/17 09:20*	*10/09/17 14:41*	*SKS*

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0144

Analytical Results

Sample I.D. EA-1-12 **Laboratory Sample ID:** 17J0144-01

Composite Start-End Date/Time: 10/04/2017 16:00 - 10/04/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	01	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 13:29	LBH
PCB as Aroclor 1221	01	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 13:29	LBH
PCB as Aroclor 1232	01	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 13:29	LBH
PCB as Aroclor 1242	01	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 13:29	LBH
PCB as Aroclor 1248	01	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 13:29	LBH
PCB as Aroclor 1254	01	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 13:29	LBH
PCB as Aroclor 1260	01	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 13:29	LBH
PCBs, Total	01	SW8082A	<0.938 mg/kg dry		0.938	1	10/16/17 13:10	10/17/17 13:29	LBH
Surr: DCB	*01*	*SW8082A*	*80.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 13:29*	*LBH*
Surr: TCMX	*01*	*SW8082A*	*70.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 13:29*	*LBH*
4,4'-DDD	01	SW8081B	<0.00625 mg/kg dry		0.00625	1	10/16/17 13:10	10/17/17 13:29	LBH
4,4'-DDE	01	SW8081B	<0.00417 mg/kg dry		0.00417	1	10/16/17 13:10	10/17/17 13:29	LBH
4,4'-DDT	01	SW8081B	<0.00417 mg/kg dry		0.00417	1	10/16/17 13:10	10/17/17 13:29	LBH
Aldrin	01	SW8081B	<0.00208 mg/kg dry		0.00208	1	10/16/17 13:10	10/17/17 13:29	LBH
Dieldrin	01	SW8081B	<0.00417 mg/kg dry		0.00417	1	10/16/17 13:10	10/17/17 13:29	LBH
Endosulfan I	01	SW8081B	<0.00417 mg/kg dry		0.00417	1	10/16/17 13:10	10/17/17 13:29	LBH
Endosulfan II	01	SW8081B	<0.00625 mg/kg dry		0.00625	1	10/16/17 13:10	10/17/17 13:29	LBH
Endrin	01	SW8081B	<0.00417 mg/kg dry		0.00417	1	10/16/17 13:10	10/17/17 13:29	LBH
gamma-BHC (Lindane)	01	SW8081B	<0.00208 mg/kg dry		0.00208	1	10/16/17 13:10	10/17/17 13:29	LBH
Heptachlor	01	SW8081B	<0.00208 mg/kg dry		0.00208	1	10/16/17 13:10	10/17/17 13:29	LBH

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0144

Analytical Results

Sample I.D. EA-1-12 **Laboratory Sample ID:** 17J0144-01

Composite Start-End Date/Time: 10/04/2017 16:00 - 10/04/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Heptachlor epoxide	01	SW8081B	<0.0417 mg/kg dry		0.0417	1	10/16/17 13:10	10/17/17 13:29	LBH
Methoxychlor	01	SW8081B	<0.0417 mg/kg dry		0.0417	1	10/16/17 13:10	10/17/17 13:29	LBH
Toxaphene	01	SW8081B	<0.0438 mg/kg dry		0.0438	1	10/16/17 13:10	10/17/17 13:29	LBH
Surr: TCMX	*01*	*SW8081B*	*65.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 13:29*	*LBH*
Surr: DCB	*01*	*SW8081B*	*80.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 13:29*	*LBH*
Wet Chemistry Analysis									
Cyanide	01	SW9012B	<1.04 mg/kg dry		1.04	1	10/06/17 16:11	10/06/17 16:11	BBP
Percent Solids	01	SM18 2540G	**95.9 %**		0.10	1	10/09/17 17:35	10/09/17 17:35	JCM

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0144

Analytical Results

Sample I.D. EA-1-24 **Laboratory Sample ID:** 17J0144-02

Composite Start-End Date/Time: 10/04/2017 16:15 - 10/04/2017 16:15

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02	SW6010C	<0.526 mg/kg dry		0.526	1	10/06/17 10:30	10/06/17 17:13	CWO
Arsenic	02	SW6010C	**4.54 mg/kg dry**		1.05	1	10/06/17 10:30	10/06/17 17:13	CWO
Barium	02	SW6010C	**18.3 mg/kg dry**		0.526	1	10/06/17 10:30	10/06/17 17:13	CWO
Beryllium	02	SW6010C	<0.210 mg/kg dry		0.210	1	10/06/17 10:30	10/06/17 17:13	CWO
Cadmium	02	SW6010C	**0.256 mg/kg dry**		0.210	1	10/06/17 10:30	10/06/17 17:13	CWO
Cobalt	02	SW6010C	**0.600 mg/kg dry**		0.210	1	10/06/17 10:30	10/06/17 17:13	CWO
Chromium	02	SW6010C	**9.86 mg/kg dry**		0.526	1	10/06/17 10:30	10/06/17 17:13	CWO
Copper	02	SW6010C	**3.78 mg/kg dry**		2.63	1	10/06/17 10:30	10/06/17 17:13	CWO
Iron	02RE1	SW6010C	**3320 mg/kg dry**		65.8	25	10/06/17 10:30	10/06/17 17:26	CWO
Mercury	02	SW7471B	0.008 mg/kg dry		0.008	1	10/12/17 09:50	10/13/17 08:21	RCV
Nickel	02	SW6010C	**2.37 mg/kg dry**		0.526	1	10/06/17 10:30	10/06/17 17:13	CWO
Lead	02	SW6010C	**3.52 mg/kg dry**		0.526	1	10/06/17 10:30	10/06/17 17:13	CWO
Antimony	02	SW6010C	<5.26 mg/kg dry		5.26	1	10/06/17 10:30	10/06/17 17:13	CWO
Selenium	02	SW6010C	<2.63 mg/kg dry		2.63	1	10/06/17 10:30	10/06/17 17:13	CWO
Thallium	02	SW6010C	<2.63 mg/kg dry		2.63	1	10/06/17 10:30	10/06/17 17:13	CWO
Vanadium	02	SW6010C	**7.31 mg/kg dry**		0.526	1	10/06/17 10:30	10/06/17 17:13	CWO
Zinc	02	SW6010C	**6.56 mg/kg dry**		0.526	1	10/06/17 10:30	10/06/17 17:13	CWO
Semivolatile Organic Compounds by GCMS									
1,2,4-Trichlorobenzene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
1,2-Dichlorobenzene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
1,3-Dichlorobenzene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
1,4-Dichlorobenzene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
2,4,5-Trichlorophenol	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
2,4,6-Trichlorophenol	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
2,4-Dichlorophenol	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
2,4-Dimethylphenol	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0144

Analytical Results

Sample I.D. EA-1-24 **Laboratory Sample ID:** 17J0144-02

Composite Start-End Date/Time: 10/04/2017 16:15 - 10/04/2017 16:15

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrophenol	02	SW8270D	<0.0883 mg/kg dry	C	0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
2,4-Dinitrotoluene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
2,6-Dinitrotoluene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
2-Chlorophenol	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
2-Methylnaphthalene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
3,3'-Dichlorobenzidine	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
3-Nitroaniline	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
4-Chloroaniline	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
4-Nitroaniline	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Acenaphthene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Anthracene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Benzo (a) anthracene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Benzo (a) pyrene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Benzo (b) fluoranthene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Benzo (k) fluoranthene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
bis (2-Chloroethoxy) methane	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
bis (2-Chloroethyl) ether	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
bis (2-chloroisopropyl) ether	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
bis (2-Ethylhexyl) phthalate	02	SW8270D	<0.0883 mg/kg dry	C	0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Butyl benzyl phthalate	02	SW8270D	<0.0883 mg/kg dry	C	0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Chrysene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Dibenz (a,h) anthracene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Diethyl phthalate	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Dimethyl phthalate	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Di-n-butyl phthalate	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Di-n-octyl phthalate	02	SW8270D	<0.0883 mg/kg dry	C	0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS

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Final Report

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0144

Analytical Results

Sample I.D. EA-1-24 **Laboratory Sample ID:** 17J0144-02

Composite Start-End Date/Time: 10/04/2017 16:15 - 10/04/2017 16:15

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluoranthene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Fluorene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Hexachlorobenzene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Hexachlorobutadiene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Hexachlorocyclopentadiene	02	SW8270D	<0.0883 mg/kg dry	C	0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Hexachloroethane	02	SW8270D	<0.0883 mg/kg dry	C	0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Indeno (1,2,3-cd) pyrene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Isophorone	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
4-Methylphenol	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Naphthalene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Nitrobenzene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
n-Nitrosodi-n-propylamine	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
n-Nitrosodiphenylamine	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
o+m+p-Cresols	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
2-Methylphenol	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
4-Chloro-3-methylphenol	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Pentachlorophenol	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Phenanthrene	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Phenol	02	SW8270D	<0.0883 mg/kg dry		0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Pyrene	02	SW8270D	<0.0883 mg/kg dry	C	0.0883	1	10/09/17 09:20	10/09/17 15:12	SKS
Surr: 2,4,6-Tribromophenol (Surr)	*02*	*SW8270D*	*73.5 %*		*35-125*		*10/09/17 09:20*	*10/09/17 15:12*	*SKS*
Surr: 2-Fluorobiphenyl (Surr)	*02*	*SW8270D*	*78.5 %*		*45-105*		*10/09/17 09:20*	*10/09/17 15:12*	*SKS*
Surr: 2-Fluorophenol (Surr)	*02*	*SW8270D*	*56.5 %*		*35-105*		*10/09/17 09:20*	*10/09/17 15:12*	*SKS*
Surr: Nitrobenzene-d5 (Surr)	*02*	*SW8270D*	*72.2 %*		*35-100*		*10/09/17 09:20*	*10/09/17 15:12*	*SKS*
Surr: Phenol-d5 (Surr)	*02*	*SW8270D*	*72.4 %*		*40-100*		*10/09/17 09:20*	*10/09/17 15:12*	*SKS*
Surr: p-Terphenyl-d14 (Surr)	*02*	*SW8270D*	*56.3 %*		*30-125*		*10/09/17 09:20*	*10/09/17 15:12*	*SKS*

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0144

Analytical Results

Sample I.D. EA-1-24 **Laboratory Sample ID:** 17J0144-02

Composite Start-End Date/Time: 10/04/2017 16:15 - 10/04/2017 16:15

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	02	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 13:48	LBH
PCB as Aroclor 1221	02	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 13:48	LBH
PCB as Aroclor 1232	02	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 13:48	LBH
PCB as Aroclor 1242	02	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 13:48	LBH
PCB as Aroclor 1248	02	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 13:48	LBH
PCB as Aroclor 1254	02	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 13:48	LBH
PCB as Aroclor 1260	02	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 13:48	LBH
PCBs, Total	02	SW8082A	<0.944 mg/kg dry		0.944	1	10/16/17 13:10	10/17/17 13:48	LBH
Surr: DCB	*02*	*SW8082A*	*90.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 13:48*	*LBH*
Surr: TCMX	*02*	*SW8082A*	*70.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 13:48*	*LBH*
4,4'-DDD	02	SW8081B	<0.00630 mg/kg dry		0.00630	1	10/16/17 13:10	10/17/17 13:48	LBH
4,4'-DDE	02	SW8081B	<0.00420 mg/kg dry		0.00420	1	10/16/17 13:10	10/17/17 13:48	LBH
4,4'-DDT	02	SW8081B	<0.00420 mg/kg dry		0.00420	1	10/16/17 13:10	10/17/17 13:48	LBH
Aldrin	02	SW8081B	<0.00210 mg/kg dry		0.00210	1	10/16/17 13:10	10/17/17 13:48	LBH
Dieldrin	02	SW8081B	<0.00420 mg/kg dry		0.00420	1	10/16/17 13:10	10/17/17 13:48	LBH
Endosulfan I	02	SW8081B	<0.00420 mg/kg dry		0.00420	1	10/16/17 13:10	10/17/17 13:48	LBH
Endosulfan II	02	SW8081B	<0.00630 mg/kg dry		0.00630	1	10/16/17 13:10	10/17/17 13:48	LBH
Endrin	02	SW8081B	<0.00420 mg/kg dry		0.00420	1	10/16/17 13:10	10/17/17 13:48	LBH
gamma-BHC (Lindane)	02	SW8081B	<0.00210 mg/kg dry		0.00210	1	10/16/17 13:10	10/17/17 13:48	LBH
Heptachlor	02	SW8081B	<0.00210 mg/kg dry		0.00210	1	10/16/17 13:10	10/17/17 13:48	LBH

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0144

Analytical Results

Sample I.D. EA-1-24 **Laboratory Sample ID:** 17J0144-02

Composite Start-End Date/Time: 10/04/2017 16:15 - 10/04/2017 16:15

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Heptachlor epoxide	02	SW8081B	<0.0420 mg/kg dry		0.0420	1	10/16/17 13:10	10/17/17 13:48	LBH
Methoxychlor	02	SW8081B	<0.0420 mg/kg dry		0.0420	1	10/16/17 13:10	10/17/17 13:48	LBH
Toxaphene	02	SW8081B	<0.0441 mg/kg dry		0.0441	1	10/16/17 13:10	10/17/17 13:48	LBH
Surr: TCMX	*02*	*SW8081B*	*65.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 13:48*	*LBH*
Surr: DCB	*02*	*SW8081B*	*90.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 13:48*	*LBH*
Wet Chemistry Analysis									
Cyanide	02	SW9012B	<0.93 mg/kg dry		0.93	1	10/06/17 16:14	10/06/17 16:14	BBP
Percent Solids	02	SM18 2540G	**94.4 %**		0.10	1	10/09/17 17:35	10/09/17 17:35	JCM

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Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Analytical Summary

Administrative	Preparation Method:
17J0144-01	SW8290
17J0144-02	SW8290

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		**Preparation Method:**	**No Prep Wet Chem**		
17J0144-01	1.00 g / 100 mL	SW9012B	BAJ0198	SAJ0181	AJ70028
17J0144-02	1.14 g / 100 mL	SW9012B	BAJ0198	SAJ0181	AJ70028
Wet Chemistry Analysis		**Preparation Method:**	**No Prep Wet Chem**		
17J0144-01	1.00 g / 1.00 mL	SM18 2540G	BAJ0235	SAJ0260	
17J0144-02	1.00 g / 1.00 mL	SM18 2540G	BAJ0235	SAJ0260	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		**Preparation Method:**	**SW3050B**		
17J0144-01	1.03 g / 50.0 mL	SW6010C	BAJ0175	SAJ0187	AJ70029
17J0144-01RE1	1.03 g / 50.0 mL	SW6010C	BAJ0175	SAJ0187	AJ70029
17J0144-02	1.01 g / 50.0 mL	SW6010C	BAJ0175	SAJ0187	AJ70029
17J0144-02RE1	1.01 g / 50.0 mL	SW6010C	BAJ0175	SAJ0187	AJ70029

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD		**Preparation Method:**	**SW3550B**		
17J0144-01	30.0 g / 5.00 mL	SW8081B	BAJ0458	SAJ0400	AI70057
17J0144-02	30.3 g / 5.00 mL	SW8081B	BAJ0458	SAJ0400	AI70057
17J0144-01	30.0 g / 5.00 mL	SW8082A	BAJ0458	SAJ0401	AI70058
17J0144-02	30.3 g / 5.00 mL	SW8082A	BAJ0458	SAJ0401	AI70058

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS		**Preparation Method:**	**SW3550C**		
17J0144-01	30.2 g / 1.00 mL	SW8270D	BAJ0226	SAJ0212	AI70063
17J0144-02	30.0 g / 1.00 mL	SW8270D	BAJ0226	SAJ0212	AI70063

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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		**Preparation Method:**	**SW7470A**		
17J0144-01	0.566 g / 20.0 mL	SW7471B	BAJ0350	SAJ0345	AJ70059
17J0144-02	0.565 g / 20.0 mL	SW7471B	BAJ0350	SAJ0345	AJ70059

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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0175 - SW3050B										
Blank (BAJ0175-BLK1)				Prepared & Analyzed: 10/06/2017						
Vanadium	<0.500 mg/kg wet	0.500	mg/kg wet							
Iron	<2.50 mg/kg wet	2.50	mg/kg wet							
Silver	<0.500 mg/kg wet	0.500	mg/kg wet							
Beryllium	<0.200 mg/kg wet	0.200	mg/kg wet							
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet							
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet							
Thallium	<2.50 mg/kg wet	2.50	mg/kg wet							
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet							
Selenium	<2.50 mg/kg wet	2.50	mg/kg wet							
Lead	<0.500 mg/kg wet	0.500	mg/kg wet							
Cobalt	<0.200 mg/kg wet	0.200	mg/kg wet							
Barium	<0.500 mg/kg wet	0.500	mg/kg wet							
Antimony	<5.00 mg/kg wet	5.00	mg/kg wet							
Zinc	<0.500 mg/kg wet	0.500	mg/kg wet							
Copper	<2.50 mg/kg wet	2.50	mg/kg wet							
Nickel	<0.500 mg/kg wet	0.500	mg/kg wet							
LCS (BAJ0175-BS1)				Prepared & Analyzed: 10/06/2017						
Nickel	111 mg/kg wet	0.500	mg/kg wet	99.5	mg/kg wet	111	80-120			
Beryllium	109 mg/kg wet	0.200	mg/kg wet	99.5	mg/kg wet	110	80-120			
Cadmium	108 mg/kg wet	0.200	mg/kg wet	99.5	mg/kg wet	109	80-120			
Chromium	111 mg/kg wet	0.500	mg/kg wet	99.5	mg/kg wet	112	80-120			
Thallium	108 mg/kg wet	2.50	mg/kg wet	99.5	mg/kg wet	109	80-120			
Lead	109 mg/kg wet	0.500	mg/kg wet	99.5	mg/kg wet	109	80-120			
Selenium	102 mg/kg wet	2.50	mg/kg wet	99.5	mg/kg wet	103	80-120			
Vanadium	111 mg/kg wet	0.500	mg/kg wet	99.5	mg/kg wet	111	80-120			
Antimony	93.6 mg/kg wet	5.00	mg/kg wet	99.5	mg/kg wet	94.1	80-120			
Cobalt	110 mg/kg wet	0.200	mg/kg wet	99.5	mg/kg wet	111	80-120			
Copper	113 mg/kg wet	2.50	mg/kg wet	99.5	mg/kg wet	114	80-120			
Iron	112 mg/kg wet	2.50	mg/kg wet	99.5	mg/kg wet	113	80-120			
Silver	5.70 mg/kg wet	0.500	mg/kg wet	4.98	mg/kg wet	115	80-120			

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Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0175 - SW3050B										
LCS (BAJ0175-BS1)				Prepared & Analyzed: 10/06/2017						
Barium	112 mg/kg wet	0.500	mg/kg wet	99.5	mg/kg wet	112	80-120			
Zinc	107 mg/kg wet	0.500	mg/kg wet	99.5	mg/kg wet	107	80-120			
Arsenic	109 mg/kg wet	1.00	mg/kg wet	99.5	mg/kg wet	109	80-120			
LCS Dup (BAJ0175-BSD1)				Prepared & Analyzed: 10/06/2017						
Antimony	90.7 mg/kg wet	5.00	mg/kg wet	92.0	mg/kg wet	98.6	80-120	3.15	20	
Selenium	92.1 mg/kg wet	2.50	mg/kg wet	92.0	mg/kg wet	100	80-120	10.4	20	
Cadmium	98.8 mg/kg wet	0.200	mg/kg wet	92.0	mg/kg wet	107	80-120	9.33	20	
Cobalt	100 mg/kg wet	0.200	mg/kg wet	92.0	mg/kg wet	109	80-120	9.31	20	
Vanadium	101 mg/kg wet	0.500	mg/kg wet	92.0	mg/kg wet	109	80-120	9.49	20	
Copper	103 mg/kg wet	2.50	mg/kg wet	92.0	mg/kg wet	112	80-120	9.22	20	
Lead	97.9 mg/kg wet	0.500	mg/kg wet	92.0	mg/kg wet	106	80-120	10.7	20	
Thallium	97.7 mg/kg wet	2.50	mg/kg wet	92.0	mg/kg wet	106	80-120	10.1	20	
Chromium	101 mg/kg wet	0.500	mg/kg wet	92.0	mg/kg wet	110	80-120	9.16	20	
Silver	5.11 mg/kg wet	0.500	mg/kg wet	4.60	mg/kg wet	111	80-120	10.8	20	
Nickel	101 mg/kg wet	0.500	mg/kg wet	92.0	mg/kg wet	109	80-120	9.53	20	
Arsenic	97.9 mg/kg wet	1.00	mg/kg wet	92.0	mg/kg wet	106	80-120	10.5	20	
Zinc	97.5 mg/kg wet	0.500	mg/kg wet	92.0	mg/kg wet	106	80-120	9.22	20	
Beryllium	99.6 mg/kg wet	0.200	mg/kg wet	92.0	mg/kg wet	108	80-120	9.02	20	
Barium	100 mg/kg wet	0.500	mg/kg wet	92.0	mg/kg wet	109	80-120	10.7	20	
Iron	102 mg/kg wet	2.50	mg/kg wet	92.0	mg/kg wet	111	80-120	9.72	20	
Matrix Spike (BAJ0175-MS1)		**Source: 17J0144-01**		Prepared & Analyzed: 10/06/2017						
Barium	141 mg/kg dry	0.517	mg/kg dry	103	31.3 mg/kg dry	106	75-125			
Beryllium	107 mg/kg dry	0.207	mg/kg dry	103	<0.207 mg/kg dry	104	75-125			
Arsenic	126 mg/kg dry	1.03	mg/kg dry	103	19.1 mg/kg dry	104	75-125			
Cadmium	107 mg/kg dry	0.207	mg/kg dry	103	0.648 mg/kg dry	103	75-125			
Cobalt	111 mg/kg dry	0.207	mg/kg dry	103	2.50 mg/kg dry	105	75-125			
Chromium	140 mg/kg dry	0.517	mg/kg dry	103	36.9 mg/kg dry	99.6	75-125			
Copper	127 mg/kg dry	2.58	mg/kg dry	103	15.5 mg/kg dry	107	75-125			
Iron	6920 mg/kg dry	2.58	mg/kg dry	103	7740 mg/kg dry	-792	75-125			M, E
Nickel	113 mg/kg dry	0.517	mg/kg dry	103	5.49 mg/kg dry	104	75-125			

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0175 - SW3050B										
Matrix Spike (BAJ0175-MS1)		**Source: 17J0144-01**		Prepared & Analyzed: 10/06/2017						
Antimony	39.0 mg/kg dry	5.17	mg/kg dry	103	<5.17 mg/kg dry	37.7	75-125			M
Selenium	102 mg/kg dry	2.58	mg/kg dry	103	<2.58 mg/kg dry	98.5	75-125			
Thallium	101 mg/kg dry	2.58	mg/kg dry	103	<2.58 mg/kg dry	97.5	75-125			
Vanadium	121 mg/kg dry	0.517	mg/kg dry	103	11.8 mg/kg dry	106	75-125			
Zinc	118 mg/kg dry	0.517	mg/kg dry	103	11.7 mg/kg dry	103	75-125			
Silver	5.75 mg/kg dry	0.517	mg/kg dry	5.17	<0.517 mg/kg dry	111	75-125			
Lead	116 mg/kg dry	0.517	mg/kg dry	103	8.99 mg/kg dry	104	75-125			
Matrix Spike Dup (BAJ0175-MSD1)		**Source: 17J0144-01**		Prepared & Analyzed: 10/06/2017						
Selenium	100 mg/kg dry	2.54	mg/kg dry	102	<2.54 mg/kg dry	98.9	75-125	1.38	20	
Lead	117 mg/kg dry	0.508	mg/kg dry	102	8.99 mg/kg dry	106	75-125	0.475	20	
Vanadium	120 mg/kg dry	0.508	mg/kg dry	102	11.8 mg/kg dry	106	75-125	0.968	20	
Cobalt	108 mg/kg dry	0.203	mg/kg dry	102	2.50 mg/kg dry	104	75-125	2.35	20	
Iron	6920 mg/kg dry	2.54	mg/kg dry	102	7740 mg/kg dry	-803	75-125	0.0484	20	M, E
Cadmium	105 mg/kg dry	0.203	mg/kg dry	102	0.648 mg/kg dry	103	75-125	2.05	20	
Arsenic	126 mg/kg dry	1.02	mg/kg dry	102	19.1 mg/kg dry	105	75-125	0.449	20	
Beryllium	107 mg/kg dry	0.203	mg/kg dry	102	<0.203 mg/kg dry	105	75-125	0.274	20	
Silver	5.58 mg/kg dry	0.508	mg/kg dry	5.08	<0.508 mg/kg dry	110	75-125	3.01	20	
Copper	126 mg/kg dry	2.54	mg/kg dry	102	15.5 mg/kg dry	109	75-125	0.174	20	
Nickel	112 mg/kg dry	0.508	mg/kg dry	102	5.49 mg/kg dry	104	75-125	1.56	20	
Antimony	37.8 mg/kg dry	5.08	mg/kg dry	102	<5.08 mg/kg dry	37.2	75-125	3.19	20	M
Thallium	98.0 mg/kg dry	2.54	mg/kg dry	102	<2.54 mg/kg dry	96.5	75-125	2.77	20	
Zinc	116 mg/kg dry	0.508	mg/kg dry	102	11.7 mg/kg dry	102	75-125	1.96	20	
Chromium	145 mg/kg dry	0.508	mg/kg dry	102	36.9 mg/kg dry	106	75-125	3.32	20	
Barium	138 mg/kg dry	0.508	mg/kg dry	102	31.3 mg/kg dry	105	75-125	2.70	20	
Batch BAJ0350 - SW7470A										
Blank (BAJ0350-BLK1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet							

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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0350 - SW7470A										
LCS (BAJ0350-BS1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	0.085 mg/kg wet	0.008	mg/kg wet	0.0852 mg/kg wet		99.5	80-120			
LCS Dup (BAJ0350-BSD1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	0.085 mg/kg wet	0.008	mg/kg wet	0.0846 mg/kg wet		101	80-120	0.694	20	
Matrix Spike (BAJ0350-MS1)		**Source: 17J0274-02**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	0.102 mg/kg dry	0.008	mg/kg dry	0.0909	0.009 mg/kg dry	103	80-120			
Matrix Spike Dup (BAJ0350-MSD1)		**Source: 17J0274-02**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	0.108 mg/kg dry	0.008	mg/kg dry	0.0984	0.009 mg/kg dry	101	80-120	6.09	20	

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Blank (BAJ0226-BLK1)				Prepared & Analyzed: 10/09/2017						
1,2,4-Trichlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1,2-Dichlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1,3-Dichlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1,4-Dichlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4,5-Trichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4,6-Trichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4-Dichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4-Dimethylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4-Dinitrophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4-Dinitrotoluene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,6-Dinitrotoluene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2-Chlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
3,3'-Dichlorobenzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
3-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Chloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Acenaphthene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (a) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (a) pyrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (b) fluoranthene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (k) fluoranthene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
bis (2-Chloroethoxy) methane	<0.0833 mg/kg wet	0.0833	mg/kg wet							
bis (2-Chloroethyl) ether	<0.0833 mg/kg wet	0.0833	mg/kg wet							
bis (2-chloroisopropyl) ether	<0.0833 mg/kg wet	0.0833	mg/kg wet							
bis (2-Ethylhexyl) phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Butyl benzyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Chrysene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Dibenz (a,h) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Diethyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Blank (BAJ0226-BLK1)				Prepared & Analyzed: 10/09/2017						
Dimethyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Di-n-butyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Di-n-octyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Fluoranthene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Fluorene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Hexachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Hexachlorobutadiene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Hexachlorocyclopentadiene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Hexachloroethane	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Indeno (1,2,3-cd) pyrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Isophorone	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Naphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Nitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
n-Nitrosodi-n-propylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
n-Nitrosodiphenylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
o+m+p-Cresols	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Chloro-3-methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Pentachlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Phenanthrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Phenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Pyrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Surr: 2,4,6-Tribromophenol (Surr)	1.40		mg/kg wet	3.31		42.4	35-125			
Surr: 2-Fluorobiphenyl (Surr)	0.797		mg/kg wet	1.66		48.1	45-105			
Surr: 2-Fluorophenol (Surr)	1.59		mg/kg wet	3.31		48.1	35-105			
Surr: Nitrobenzene-d5 (Surr)	0.756		mg/kg wet	1.66		45.6	35-100			
Surr: Phenol-d5 (Surr)	1.48		mg/kg wet	3.31		44.7	40-100			
Surr: p-Terphenyl-d14 (Surr)	0.556		mg/kg wet	1.66		33.6	30-125			

AIR WATER & SOIL LABORATORIES, INC.

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
LCS (BAJ0226-BS1)				Prepared & Analyzed: 10/09/2017						
1,1-Biphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,2,4,5-Tetrachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,2,4-Trichlorobenzene	2.98 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	93.5	21.8-66.7			L
1,2-Dichlorobenzene	3.04 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	95.4	22-60			L
1,2-Dinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,2-Diphenylhydrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,3,5-Trinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,3-Dichlorobenzene	2.75 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	86.3	22-60			L
1,3-Dinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,4-Dichlorobenzene	2.86 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	89.8	13-68			L
1,4-Dinitrobenzene	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			
1,4-Dioxane	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,4-Naphthoquinone	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1-Chloronaphthalene	2.90 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2,3,4,6-Tetrachlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2,3,5,6-Tetrachlorophenol	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			
2,3,7,8-TCDD (SIM)	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2,3-Dichloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet		0-200			
2,4,5-Trichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		50-110			
2,4,6-Trichlorophenol	2.85 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	89.6	50-115			
2,4-Dichlorophenol	3.05 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	95.8	50-105			
2,4-Dimethylphenol	3.07 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	96.2	30-110			
2,4-Dinitrophenol	2.38 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	74.8	15-140			
2,4-Dinitrotoluene	3.07 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	96.3	21-99			
2,6-Dichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2,6-Dinitrotoluene	3.12 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	98.0	15-140			
2-Acetylaminofluorene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2-Chloronaphthalene	2.95 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	92.6	45-105			
2-Chlorophenol	2.66 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	83.4	15-74			L

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
LCS (BAJ0226-BS1)				Prepared & Analyzed: 10/09/2017						
2-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		45-105			
2-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2-Nitrophenol	2.86 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	89.9	40-115			
2-Picoline	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
3,3'-Dichlorobenzidine	3.29 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	103	20-110			
3,3'-Dimethylbenzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
3-Methylcholanthrene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
3-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
4,4'-DDE	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
4,6-Dinitro-2-methylphenol	2.66 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	83.4	40-130			
4-Aminobiphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
4-Bromophenyl phenyl ether	3.26 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	102	15-110			
4-Chloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		15-110			
4-Chlorophenyl phenyl ether	2.98 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	93.5	15-110			
4-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
4-Nitrophenol	2.84 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	89.2	0-125			
4-Nitroquinoline-1-oxide	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
5-Nitro-o-toluidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
7,12-Dimethylbenz (a) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Acenaphthene	2.98 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	93.4	27.7-85.5			L
Acenaphthylene	3.17 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	99.7	50-105			
Acetochlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Acetophenone	2.20 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	69.2	0-200			
Alachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Aldrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
alpha,alpha-Dimethyl phenethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
alpha-Terpineol	3.19 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	100	0-200			
Aniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Anthracene	3.11 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	97.7	55-110			
Aramite	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
LCS (BAJ0226-BS1)				Prepared & Analyzed: 10/09/2017						
Atrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Benzaldehyde	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Benzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet		0-130			
Benzo (a) anthracene	2.96 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	92.9	55-110			
Benzo (a) pyrene	3.07 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	96.5	55-110			
Benzo (b) fluoranthene	3.36 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	106	45-120			
Benzo (g,h,i) perylene	2.87 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	90.2	40-125			
Benzo (k) fluoranthene	3.62 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	114	45-125			
Benzoic acid	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-125			
Benzyl alcohol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
bis (2-Chloroethoxy) methane	3.14 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	98.5	40-125			
bis (2-Chloroethyl) ether	2.92 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	91.6	40-125			
bis (2-chloroisopropyl) ether	2.97 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	93.3	40-125			
bis (2-Ethylhexyl) adipate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
bis (2-Ethylhexyl) phthalate	2.45 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	77.0	40-125			
Butachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Butyl benzyl phthalate	2.27 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	71.1	45-115			
Caprolactam	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Carbazole	4.21 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	132	0-200			
Catechol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Chlorobenzilate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Chrysene	2.94 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	92.4	55-110			
Diallate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Dibenz (a,h) anthracene	3.24 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	102	40-125			
Dibenz (a,j) acridine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Dibenzofuran	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Dieldrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Diethyl phthalate	2.88 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	90.4	40-120			
Dimethoate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Dimethyl phthalate	2.80 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	88.0	25-125			
Dimethylphenethylamine	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			

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Certificate of Analysis

Final Report

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
LCS (BAJ0226-BS1)				Prepared & Analyzed: 10/09/2017						
Di-n-butyl phthalate	4.63 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	145	55-115			L
Di-n-octyl phthalate	2.44 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	76.7	35-135			
Dinoseb	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			
Diphenyl ether	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			
Diphenylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Disulfoton	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Endrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
EPTC	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Ethyl methacrylate	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			
Ethyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Ethyl parathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Famphur	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Fluoranthene	3.45 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	108	55-115			
Fluorene	2.93 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	92.0	50-110			
gamma-BHC (Lindane)	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Heptachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Heptachlor epoxide	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Hexachlorobenzene	3.20 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	101	25-125			
Hexachlorobutadiene	3.51 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	110	25-125			
Hexachlorocyclopentadiene	1.63 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	51.3	25-125			
Hexachloroethane	2.72 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	85.3	25-125			
Hexachlorophene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Hexachloropropene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Indeno (1,2,3-cd) pyrene	3.14 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	98.5	45-125			
Isodrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Isophorone	2.92 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	91.5	10-110			
Isosafrole	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Kepone	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Library Search	<0.00 mg/kg wet	0.00	mg/kg wet		mg/kg wet		0-200			
4-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		40-105			
Methapyrilene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
LCS (BAJ0226-BS1)				Prepared & Analyzed: 10/09/2017						
Methoxychlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Methyl methacrylate	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			
Methyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Methyl parathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Metolachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Metribuzin	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Molinate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Naphthalene	2.96 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	93.1	40-100			
n-Decane	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet		0-200			
Nicotine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Nitrobenzene	2.77 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	86.8	40-100			
n-Nitrosodiethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
n-Nitrosodimethylamine	2.19 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	68.9	25-110			
n-Nitrosodi-n-butylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
n-Nitrosodi-n-propylamine	2.81 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	88.2	12-97			
n-Nitrosodiphenylamine	2.46 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	77.3	12-97			
n-Nitrosomethylethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		25-110			
n-Nitrosomorpholine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
n-Nitrosopiperidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
n-Nitrosopyrrolidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
n-Octadecane	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet		0-200			
Nonylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
o,o,o-Triethyl phosphorothioate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
o,o-Diethyl o-2-pyrazinyl phosphorothioate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
o+m+p-Cresols	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		40-110			
o-Toluidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
p-(Dimethylamino) azobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
4-Chloro-3-methylphenol	2.96 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	92.8	10-91			L
Pentachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Pentachloroethane	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
LCS (BAJ0226-BS1)				Prepared & Analyzed: 10/09/2017						
Pentachloronitrobenzene (quintozene)	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Pentachlorophenol	2.18 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	68.4	30-109			
Phenacetin	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Phenanthrene	3.10 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	97.3	50-115			
Phenol	2.67 mg/kg wet	0.0833	mg/kg wet	3.22	mg/kg wet	83.0	0-115			
Phorate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
p-Phenylenediamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Pronamide	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Propachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Pyrene	2.36 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	74.1	27-110			
Pyridine	1.85 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	58.2	0-200			
Safrole	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Simazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Sulfotepp	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Terbacil	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Malathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Surr: 2,4,6-Tribromophenol (Surr)	3.17		mg/kg wet	3.18	mg/kg wet	99.5	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1.45		mg/kg wet	1.59	mg/kg wet	91.2	45-105			
Surr: 2-Fluorophenol (Surr)	2.10		mg/kg wet	3.18	mg/kg wet	66.0	35-105			
Surr: Nitrobenzene-d5 (Surr)	1.37		mg/kg wet	1.59	mg/kg wet	86.2	35-100			
Surr: Phenol-d5 (Surr)	2.79		mg/kg wet	3.18	mg/kg wet	87.5	40-100			
Surr: p-Terphenyl-d14 (Surr)	0.939		mg/kg wet	1.59	mg/kg wet	59.0	30-125			
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
1,1-Biphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1,2,4,5-Tetrachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1,2,4-Trichlorobenzene	2.09 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	66.9	21.8-66.7			M
1,2-Dichlorobenzene	2.15 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.9	22-60			M
1,2-Dinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1,2-Diphenylhydrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1,3,5-Trinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
1,3-Dichlorobenzene	1.96 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	62.7	22-60			M
1,3-Dinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1,4-Dichlorobenzene	2.02 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	64.7	22-60			M
1,4-Dinitrobenzene	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
1,4-Dioxane	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1,4-Naphthoquinone	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1-Chloronaphthalene	2.10 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2,3,4,6-Tetrachlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2,3,5,6-Tetrachlorophenol	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
2,3,7,8-TCDD (SIM)	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2,3-Dichloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet		0-200			
2,4,5-Trichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		50-110			
2,4,6-Trichlorophenol	2.12 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	67.9	50-115			
2,4-Dichlorophenol	2.32 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	74.1	50-105			
2,4-Dimethylphenol	2.17 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	69.6	30-110			
2,4-Dinitrophenol	1.89 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	60.4	15-140			
2,4-Dinitrotoluene	2.26 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	72.2	17-111			
2,6-Dichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2,6-Dinitrotoluene	2.27 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	72.6	15-140			
2-Acetylaminofluorene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2-Chloronaphthalene	2.13 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.1	45-105			
2-Chlorophenol	1.98 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	63.5	19-64			
2-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		45-105			
2-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2-Nitrophenol	2.26 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	72.3	40-115			
2-Picoline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
3,3'-Dichlorobenzidine	2.51 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	80.4	20-110			
3,3'-Dimethylbenzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
3-Methylcholanthrene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
3-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
4,4'-DDE	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
4,6-Dinitro-2-methylphenol	2.06 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	65.8	40-130			
4-Aminobiphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
4-Bromophenyl phenyl ether	2.37 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	75.9	15-110			
4-Chloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		15-110			
4-Chlorophenyl phenyl ether	2.16 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	69.2	15-110			
4-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
4-Nitrophenol	2.27 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	72.7	0-125			
4-Nitroquinoline-1-oxide	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
5-Nitro-o-toluidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
7,12-Dimethylbenz (a) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Acenaphthene	2.14 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.5	24-90			
Acenaphthylene	2.27 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	72.8	50-105			
Acetochlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Acetophenone	1.76 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	56.2	0-200			
Alachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Aldrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
alpha,alpha-Dimethyl phenethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
alpha-Terpineol	2.31 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	73.8	0-200			
Aniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Anthracene	2.16 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	69.0	55-110			
Aramite	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Atrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Benzaldehyde	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Benzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet		0-130			
Benzo (a) anthracene	2.23 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	71.3	55-110			
Benzo (a) pyrene	2.26 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	72.4	55-110			
Benzo (b) fluoranthene	2.31 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	74.0	45-120			
Benzo (g,h,i) perylene	1.81 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	57.9	40-125			

AIR WATER & SOIL LABORATORIES, INC.

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Final Report

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
Benzo (k) fluoranthene	2.40 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	76.9	45-125			
Benzoic acid	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-125			
Benzyl alcohol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
bis (2-Chloroethoxy) methane	2.31 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	73.9	40-125			
bis (2-Chloroethyl) ether	2.16 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	69.0	40-125			
bis (2-chloroisopropyl) ether	2.14 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.4	40-125			
bis (2-Ethylhexyl) adipate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
bis (2-Ethylhexyl) phthalate	1.75 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	55.9	40-125			
Butachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Butyl benzyl phthalate	1.68 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	53.7	45-115			
Caprolactam	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Carbazole	3.11 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	99.5	0-200			
Catechol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Chlorobenzilate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Chrysene	2.12 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	67.9	55-110			
Diallate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Dibenz (a,h) anthracene	2.13 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.1	40-125			
Dibenz (a,j) acridine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Dibenzofuran	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Dieldrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Diethyl phthalate	2.05 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	65.7	40-120			
Dimethoate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Dimethyl phthalate	2.03 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	65.1	25-125			
Dimethylphenethylamine	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
Di-n-butyl phthalate	2.60 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	83.3	55-115			
Di-n-octyl phthalate	1.69 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	54.0	35-135			
Dinoseb	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
Diphenyl ether	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
Diphenylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Disulfoton	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Endrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
EPTC	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Ethyl methacrylate	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
Ethyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Ethyl parathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Famphur	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Fluoranthene	2.44 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	78.0	55-115			
Fluorene	2.15 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.7	50-110			
gamma-BHC (Lindane)	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Heptachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Heptachlor epoxide	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Hexachlorobenzene	2.32 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	74.3	25-125			
Hexachlorobutadiene	2.43 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	77.7	25-125			
Hexachlorocyclopentadiene	0.882 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	28.2	25-125			
Hexachloroethane	1.95 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	62.4	25-125			
Hexachlorophene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Hexachloropropene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Indeno (1,2,3-cd) pyrene	2.06 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	65.8	45-125			
Isodrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Isophorone	2.15 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.9	10-110			
Isosafrole	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Kepone	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Library Search	<0.00 mg/kg wet	0.00	mg/kg wet		<0.00 mg/kg wet		0-200			
4-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		40-105			
Methapyrilene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Methoxychlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Methyl methacrylate	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
Methyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Methyl parathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Metolachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Metribuzin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Molinate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
Naphthalene	2.08 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	66.5	40-100			
n-Decane	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet		0-200			
Nicotine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Nitrobenzene	2.00 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	64.0	40-100			
n-Nitrosodiethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
n-Nitrosodimethylamine	1.71 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	54.7	25-110			
n-Nitrosodi-n-butylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
n-Nitrosodi-n-propylamine	2.07 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	66.2	12-97			
n-Nitrosodiphenylamine	1.79 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	57.3	12-97			
n-Nitrosomethylethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		25-110			
n-Nitrosomorpholine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
n-Nitrosopiperidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
n-Nitrosopyrrolidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
n-Octadecane	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet		0-200			
Nonylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
o,o,o-Triethyl phosphorothioate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
o,o-Diethyl o-2-pyrazinyl phosphorothioate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
o+m+p-Cresols	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		40-110			
o-Toluidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
p-(Dimethylamino) azobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
4-Chloro-3-methylphenol	2.20 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	70.5	10-91			
Pentachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Pentachloroethane	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Pentachloronitrobenzene (quintozene)	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Pentachlorophenol	2.04 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	65.4	27-109			
Phenacetin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Phenanthrene	2.25 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	71.9	50-115			
Phenol	1.98 mg/kg wet	0.0833	mg/kg wet	3.16	<0.0833 mg/kg wet	62.8	0-115			
Phorate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
p-Phenylenediamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
Pronamide	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Propachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Pyrene	1.78 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	57.1	23-110			
Pyridine	0.395 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	12.6	0-200			
Safrole	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Simazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Sulfotepp	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Terbacil	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Malathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Surr: 2,4,6-Tribromophenol (Surr)	2.45		mg/kg wet	3.12	mg/kg wet	78.4	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1.03		mg/kg wet	1.56	mg/kg wet	66.1	45-105			
Surr: 2-Fluorophenol (Surr)	2.16		mg/kg wet	3.12	mg/kg wet	69.2	35-105			
Surr: Nitrobenzene-d5 (Surr)	1.01		mg/kg wet	1.56	mg/kg wet	64.7	35-100			
Surr: Phenol-d5 (Surr)	2.09		mg/kg wet	3.12	mg/kg wet	67.0	40-100			
Surr: p-Terphenyl-d14 (Surr)	0.744		mg/kg wet	1.56	mg/kg wet	47.6	30-125			
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
1,1-Biphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,2,4,5-Tetrachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,2,4-Trichlorobenzene	2.28 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	68.7	21.8-66.7	8.77	20	M
1,2-Dichlorobenzene	2.36 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	70.9	22-60	9.05	20	M
1,2-Dinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,2-Diphenylhydrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,3,5-Trinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,3-Dichlorobenzene	2.12 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	63.8	22-60	7.87	20	M
1,3-Dinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,4-Dichlorobenzene	2.19 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	65.8	22-60	7.82	20	M
1,4-Dinitrobenzene	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
1,4-Dioxane	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,4-Naphthoquinone	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1-Chloronaphthalene	2.26 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200	7.35	20	

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
1-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2,3,4,6-Tetrachlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2,3,5,6-Tetrachlorophenol	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
2,3,7,8-TCDD (SIM)	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2,3-Dichloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet		0-200		20	
2,4,5-Trichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		50-110		20	
2,4,6-Trichlorophenol	2.32 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.7	50-115	8.83	20	
2,4-Dichlorophenol	2.50 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	75.2	50-105	7.66	20	
2,4-Dimethylphenol	2.40 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	72.3	30-110	10.0	20	
2,4-Dinitrophenol	2.22 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	66.8	15-140	16.2	20	
2,4-Dinitrotoluene	2.39 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	71.9	17-111	5.73	20	
2,6-Dichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2,6-Dinitrotoluene	2.43 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	73.0	15-140	6.74	20	
2-Acetylaminofluorene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2-Chloronaphthalene	2.29 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	68.9	45-105	7.36	20	
2-Chlorophenol	2.12 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	64.0	19-64	6.79	20	
2-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		45-105		20	
2-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2-Nitrophenol	2.41 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	72.7	40-115	6.67	20	
2-Picoline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
3,3'-Dichlorobenzidine	2.81 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	84.6	20-110	11.2	20	
3,3'-Dimethylbenzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
3-Methylcholanthrene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
3-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
4,4'-DDE	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
4,6-Dinitro-2-methylphenol	2.32 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.9	40-130	12.1	20	
4-Aminobiphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
4-Bromophenyl phenyl ether	2.52 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	76.0	15-110	6.26	20	
4-Chloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		15-110		20	

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Final Report

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
4-Chlorophenyl phenyl ether	2.31 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.6	15-110	6.69	20	
4-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
4-Nitrophenol	2.47 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	74.4	0-125	8.41	20	
4-Nitroquinoline-1-oxide	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
5-Nitro-o-toluidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
7,12-Dimethylbenz (a) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Acenaphthene	2.32 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.9	24-90	8.11	20	
Acenaphthylene	2.44 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	73.5	50-105	7.09	20	
Acetochlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Acetophenone	1.89 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	57.0	0-200	7.48	20	
Alachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Aldrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
alpha,alpha-Dimethyl phenethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
alpha-Terpineol	2.53 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	76.3	0-200	9.42	20	
Aniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Anthracene	2.35 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	70.6	55-110	8.49	20	
Aramite	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Atrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Benzaldehyde	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Benzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet		0-130		20	
Benzo (a) anthracene	2.43 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	73.1	55-110	8.57	20	
Benzo (a) pyrene	2.52 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	75.8	55-110	10.6	20	
Benzo (b) fluoranthene	2.71 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	81.7	45-120	16.0	20	
Benzo (g,h,i) perylene	2.04 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	61.4	40-125	11.9	20	
Benzo (k) fluoranthene	2.38 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	71.5	45-125	1.21	20	
Benzoic acid	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-125		20	
Benzyl alcohol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
bis (2-Chloroethoxy) methane	2.52 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	75.9	40-125	8.80	20	
bis (2-Chloroethyl) ether	2.32 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.9	40-125	7.40	20	
bis (2-chloroisopropyl) ether	2.28 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	68.7	40-125	6.67	20	
bis (2-Ethylhexyl) adipate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
bis (2-Ethylhexyl) phthalate	1.86 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	56.1	40-125	6.51	20	
Butachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Butyl benzyl phthalate	1.75 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	52.6	45-115	3.92	20	
Caprolactam	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Carbazole	3.32 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	99.8	0-200	6.39	20	
Catechol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Chlorobenzilate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Chrysene	2.30 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.2	55-110	8.03	20	
Diallate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Dibenz (a,h) anthracene	2.45 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	73.8	40-125	14.1	20	
Dibenz (a,j) acridine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Dibenzofuran	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Dieldrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Diethyl phthalate	2.22 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	66.9	40-120	7.84	20	
Dimethoate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Dimethyl phthalate	2.16 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	65.1	25-125	6.15	20	
Dimethylphenethylamine	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
Di-n-butyl phthalate	2.79 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	84.1	55-115	7.13	20	
Di-n-octyl phthalate	1.76 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	53.0	35-135	4.31	20	
Dinoseb	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
Diphenyl ether	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
Diphenylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Disulfoton	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Endrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
EPTC	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Ethyl methacrylate	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
Ethyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Ethyl parathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Famphur	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Fluoranthene	2.66 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	80.1	55-115	8.71	20	
Fluorene	2.29 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.0	50-110	6.64	20	

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Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
gamma-BHC (Lindane)	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Heptachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Heptachlor epoxide	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Hexachlorobenzene	2.51 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	75.6	25-125	7.88	20	
Hexachlorobutadiene	2.65 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	79.8	25-125	8.81	20	
Hexachlorocyclopentadiene	1.06 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	31.9	25-125	18.3	20	
Hexachloroethane	2.10 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	63.2	25-125	7.31	20	
Hexachlorophene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Hexachloropropene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Indeno (1,2,3-cd) pyrene	2.34 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	70.5	45-125	13.0	20	
Isodrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Isophorone	2.36 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	70.9	10-110	8.99	20	
Isosafrole	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Kepone	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Library Search	<0.00 mg/kg wet	0.00	mg/kg wet		<0.00 mg/kg wet		0-200		20	
4-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		40-105		20	
Methapyrilene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Methoxychlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Methyl methacrylate	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
Methyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Methyl parathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Metolachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Metribuzin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Molinate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Naphthalene	2.30 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.2	40-100	10.1	20	
n-Decane	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet		0-200		20	
Nicotine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Nitrobenzene	2.09 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	62.8	40-100	4.32	20	
n-Nitrosodiethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
n-Nitrosodimethylamine	1.97 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	59.2	25-110	14.0	20	
n-Nitrosodi-n-butylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
n-Nitrosodi-n-propylamine	2.18 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	65.6	12-97	5.22	20	
n-Nitrosodiphenylamine	1.90 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	57.1	12-97	5.75	20	
n-Nitrosomethylethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		25-110		20	
n-Nitrosomorpholine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
n-Nitrosopiperidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
n-Nitrosopyrrolidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
n-Octadecane	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet		0-200		20	
Nonylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
o,o,o-Triethyl phosphorothioate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
o,o-Diethyl o-2-pyrazinyl phosphorothioate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
o+m+p-Cresols	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		40-110		20	
o-Toluidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
p-(Dimethylamino) azobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
4-Chloro-3-methylphenol	2.37 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	71.4	10-91	7.47	20	
Pentachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Pentachloroethane	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Pentachloronitrobenzene (quintozene)	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Pentachlorophenol	2.22 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	66.8	27-109	8.19	20	
Phenacetin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Phenanthrene	2.41 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	72.5	50-115	6.96	20	
Phenol	2.14 mg/kg wet	0.0833	mg/kg wet	3.36	<0.0833 mg/kg wet	63.7	0-115	7.46	20	
Phorate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
p-Phenylenediamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Pronamide	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Propachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Pyrene	1.80 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	54.3	23-110	1.05	20	
Pyridine	0.195 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	5.88	0-200	67.6	20	P
Safrole	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Simazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Sulfotepp	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
Terbacil	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Malathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Surr: 2,4,6-Tribromophenol (Surr)	2.59		mg/kg wet	3.32	mg/kg wet	78.0	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1.09		mg/kg wet	1.66	mg/kg wet	65.8	45-105			
Surr: 2-Fluorophenol (Surr)	2.30		mg/kg wet	3.32	mg/kg wet	69.2	35-105			
Surr: Nitrobenzene-d5 (Surr)	1.04		mg/kg wet	1.66	mg/kg wet	62.4	35-100			
Surr: Phenol-d5 (Surr)	2.16		mg/kg wet	3.32	mg/kg wet	65.1	40-100			
Surr: p-Terphenyl-d14 (Surr)	0.751		mg/kg wet	1.66	mg/kg wet	45.2	30-125			

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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
Blank (BAJ0458-BLK1)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
PCB as Aroclor 1016	<0.100 mg/kg wet	0.100	mg/kg wet							
4,4'-DDD	<0.00600 mg/kg wet	0.00600	mg/kg wet							
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet							
4,4'-DDE	<0.00400 mg/kg wet	0.00400	mg/kg wet							
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet							
4,4'-DDT	<0.00400 mg/kg wet	0.00400	mg/kg wet							
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet							
Aldrin	<0.00200 mg/kg wet	0.00200	mg/kg wet							
PCB as Aroclor 1260	<0.100 mg/kg wet	0.100	mg/kg wet							
Dieldrin	<0.00400 mg/kg wet	0.00400	mg/kg wet							
Endosulfan I	<0.00400 mg/kg wet	0.00400	mg/kg wet							
Endosulfan II	<0.00600 mg/kg wet	0.00600	mg/kg wet							
Endrin	<0.00400 mg/kg wet	0.00400	mg/kg wet							
gamma-BHC (Lindane)	<0.00200 mg/kg wet	0.00200	mg/kg wet							
Heptachlor	<0.00200 mg/kg wet	0.00200	mg/kg wet							
Heptachlor epoxide	<0.0400 mg/kg wet	0.0400	mg/kg wet							
Methoxychlor	<0.0400 mg/kg wet	0.0400	mg/kg wet							
Toxaphene	<0.0420 mg/kg wet	0.0420	mg/kg wet							
PCBs, Total	<0.900 mg/kg wet	0.900	mg/kg wet							
Surr: DCB	0.0342		mg/kg wet	0.0326		105	30-105			
Surr: TCMX	0.0244		mg/kg wet	0.0326		75.0	30-105			
Surr: TCMX	0.0244		mg/kg wet	0.0326		75.0	30-105			
Surr: TCMX [2C]	0.0212		mg/kg wet	0.0326		65.0	30-105			
Surr: DCB	0.0342		mg/kg wet	0.0326		105	30-105			
Surr: DCB [2C]	0.0277		mg/kg wet	0.0326		85.0	30-105			

AIR WATER & SOIL LABORATORIES, INC.

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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
LCS (BAJ0458-BS1)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	0.0183 mg/kg wet	0.00600	mg/kg wet	0.0167	mg/kg wet	110	23-134			
4,4'-DDE	0.0167 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	100	23-134			
4,4'-DDT	0.0200 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	120	23-134			
Aldrin	0.0150 mg/kg wet	0.00200	mg/kg wet	0.0167	mg/kg wet	90.0	23-134			
Dieldrin	0.0167 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Endosulfan I	0.0167 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Endosulfan II	0.0183 mg/kg wet	0.00600	mg/kg wet	0.0167	mg/kg wet	110	23-134			
Endrin	0.0200 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	120	23-134			
gamma-BHC (Lindane)	0.0167 mg/kg wet	0.00200	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Heptachlor	0.0167 mg/kg wet	0.00200	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Heptachlor epoxide	<0.0400 mg/kg wet	0.0400	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Methoxychlor	<0.0400 mg/kg wet	0.0400	mg/kg wet	0.0167	mg/kg wet	120	23-134			
Toxaphene	<0.0420 mg/kg wet	0.0420	mg/kg wet		mg/kg wet		23-134			
Surr: TCMX	0.0333		mg/kg wet	0.0333	mg/kg wet	100	30-105			
Surr: TCMX [2C]	0.0350		mg/kg wet	0.0333	mg/kg wet	105	30-105			
Surr: DCB	0.0350		mg/kg wet	0.0333	mg/kg wet	105	30-105			
Surr: DCB [2C]	0.0350		mg/kg wet	0.0333	mg/kg wet	105	30-105			
LCS (BAJ0458-BS2)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
PCB as Aroclor 1016	0.285 mg/kg wet	0.100	mg/kg wet	0.160	mg/kg wet	178	60-140			L
PCB as Aroclor 1260	0.271 mg/kg wet	0.100	mg/kg wet	0.160	mg/kg wet	169	60-140			L
Surr: DCB	0.0321		mg/kg wet	0.0321	mg/kg wet	100	30-105			
Surr: TCMX	0.0272		mg/kg wet	0.0321	mg/kg wet	85.0	30-105			
LCS (BAJ0458-BS3)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	<0.00600 mg/kg wet	0.00600	mg/kg wet		mg/kg wet		23-134			
4,4'-DDE	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
4,4'-DDT	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
Aldrin	<0.00200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
Dieldrin	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
Endosulfan I	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
Endosulfan II	<0.00600 mg/kg wet	0.00600	mg/kg wet		mg/kg wet		23-134			

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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
LCS (BAJ0458-BS3)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
Endrin	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
gamma-BHC (Lindane)	<0.00200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
Heptachlor	<0.00200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
Heptachlor epoxide	<0.0400 mg/kg wet	0.0400	mg/kg wet		mg/kg wet		23-134			
Methoxychlor	<0.0400 mg/kg wet	0.0400	mg/kg wet		mg/kg wet		23-134			
Toxaphene	0.340 mg/kg wet	0.0420	mg/kg wet	0.411	mg/kg wet	82.8	23-134			
Surr: TCMX	ND		mg/kg wet	0.0329	mg/kg wet		30-105			
Surr: TCMX [2C]	ND		mg/kg wet	0.0329	mg/kg wet		30-105			
Surr: DCB	ND		mg/kg wet	0.0329	mg/kg wet		30-105			
Surr: DCB [2C]	ND		mg/kg wet	0.0329	mg/kg wet		30-105			
LCS (BAJ0458-BS4)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	<0.00600 mg/kg wet	0.00600	mg/kg wet		mg/kg wet		23-134			
4,4'-DDE	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
4,4'-DDT	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
Aldrin	<0.00200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
Dieldrin	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
Endosulfan I	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
Endosulfan II	<0.00600 mg/kg wet	0.00600	mg/kg wet		mg/kg wet		23-134			
Endrin	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
gamma-BHC (Lindane)	<0.00200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
Heptachlor	<0.00200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
Heptachlor epoxide	<0.0400 mg/kg wet	0.0400	mg/kg wet		mg/kg wet		23-134			
Methoxychlor	<0.0400 mg/kg wet	0.0400	mg/kg wet		mg/kg wet		23-134			
Toxaphene	<0.0420 mg/kg wet	0.0420	mg/kg wet		mg/kg wet		23-134			
Surr: TCMX [2C]	ND		mg/kg wet	0.0328	mg/kg wet		30-105			
Surr: TCMX	ND		mg/kg wet	0.0328	mg/kg wet		30-105			
Surr: DCB	ND		mg/kg wet	0.0328	mg/kg wet		30-105			
Surr: DCB [2C]	ND		mg/kg wet	0.0328	mg/kg wet		30-105			

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Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
Matrix Spike (BAJ0458-MS1)		**Source: 17J0144-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	0.0194 mg/kg dry	0.00636	mg/kg dry	0.0177	<0.00636 mg/kg dry	110	23-134			
4,4'-DDE	0.0177 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	100	23-134			
4,4'-DDT	0.0212 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	120	23-134			
Aldrin	0.0177 mg/kg dry	0.00212	mg/kg dry	0.0177	<0.00212 mg/kg dry	100	23-134			
Dieldrin	0.0177 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	100	23-134			
Endosulfan I	0.0177 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	100	23-134			
Endosulfan II	0.0177 mg/kg dry	0.00636	mg/kg dry	0.0177	<0.00636 mg/kg dry	100	23-134			
Endrin	0.0247 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	140	23-134			M
gamma-BHC (Lindane)	0.0194 mg/kg dry	0.00212	mg/kg dry	0.0177	<0.00212 mg/kg dry	110	23-134			
Heptachlor	0.0194 mg/kg dry	0.00212	mg/kg dry	0.0177	<0.00212 mg/kg dry	110	23-134			
Heptachlor epoxide	<0.0424 mg/kg dry	0.0424	mg/kg dry	0.0177	<0.0424 mg/kg dry	100	23-134			
Methoxychlor	<0.0424 mg/kg dry	0.0424	mg/kg dry	0.0177	<0.0424 mg/kg dry	130	23-134			
Surr: TCMX	0.0353		mg/kg dry	0.0353	mg/kg dry	100	30-105			
Surr: TCMX [2C]	0.0247		mg/kg dry	0.0353	mg/kg dry	70.0	30-105			
Surr: DCB	0.0336		mg/kg dry	0.0353	mg/kg dry	95.0	30-105			
Surr: DCB [2C]	0.0265		mg/kg dry	0.0353	mg/kg dry	75.0	30-105			
Matrix Spike (BAJ0458-MS2)		**Source: 17J0274-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
PCB as Aroclor 1016	0.300 mg/kg dry	0.103	mg/kg dry	0.172	<0.103 mg/kg dry	174	60-140			M
PCB as Aroclor 1260	0.248 mg/kg dry	0.103	mg/kg dry	0.172	<0.103 mg/kg dry	144	60-140			M
Surr: DCB	0.0310		mg/kg dry	0.0345	mg/kg dry	90.0	30-105			
Surr: TCMX	0.0293		mg/kg dry	0.0345	mg/kg dry	85.0	30-105			
Matrix Spike Dup (BAJ0458-MSD1)		**Source: 17J0144-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	0.0208 mg/kg dry	0.00623	mg/kg dry	0.0173	<0.00623 mg/kg dry	120	23-134	6.72	20	
4,4'-DDE	0.0190 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	110	23-134	7.55	20	
4,4'-DDT	0.0190 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	110	23-134	10.7	20	
Aldrin	0.0190 mg/kg dry	0.00208	mg/kg dry	0.0173	<0.00208 mg/kg dry	110	23-134	7.55	20	
Dieldrin	0.0190 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	110	23-134	7.55	20	
Endosulfan I	0.0190 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	110	23-134	7.55	20	
Endosulfan II	0.0190 mg/kg dry	0.00623	mg/kg dry	0.0173	<0.00623 mg/kg dry	110	23-134	7.55	20	
Endrin	0.0242 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	140	23-134	1.98	20	M

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
Matrix Spike Dup (BAJ0458-MSD1)		**Source: 17J0144-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
gamma-BHC (Lindane)	0.0190 mg/kg dry	0.00208	mg/kg dry	0.0173	<0.00208 mg/kg dry	110	23-134	1.98	20	
Heptachlor	0.0190 mg/kg dry	0.00208	mg/kg dry	0.0173	<0.00208 mg/kg dry	110	23-134	1.98	20	
Heptachlor epoxide	<0.0416 mg/kg dry	0.0416	mg/kg dry	0.0173	<0.0416 mg/kg dry	110	23-134	7.55	20	
Methoxychlor	<0.0416 mg/kg dry	0.0416	mg/kg dry	0.0173	<0.0416 mg/kg dry	120	23-134	9.98	20	
Surr: TCMX [2C]	0.0381		mg/kg dry	0.0346	mg/kg dry	110	30-105			
Surr: TCMX	0.0364		mg/kg dry	0.0346	mg/kg dry	105	30-105			
Surr: DCB	0.0346		mg/kg dry	0.0346	mg/kg dry	100	30-105			
Surr: DCB [2C]	0.0381		mg/kg dry	0.0346	mg/kg dry	110	30-105			
Matrix Spike Dup (BAJ0458-MSD2)		**Source: 17J0274-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
PCB as Aroclor 1016	0.316 mg/kg dry	0.106	mg/kg dry	0.176	<0.106 mg/kg dry	179	60-140	5.13	20	M
PCB as Aroclor 1260	0.282 mg/kg dry	0.106	mg/kg dry	0.176	<0.106 mg/kg dry	160	60-140	12.8	20	M
Surr: DCB	0.0300		mg/kg dry	0.0353	mg/kg dry	85.0	30-105			
Surr: TCMX	0.0282		mg/kg dry	0.0353	mg/kg dry	80.0	30-105			

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Wet Chemistry Analysis - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0198 - No Prep Wet Chem										
Blank (BAJ0198-BLK1)				Prepared & Analyzed: 10/06/2017						
Cyanide	<0.01 mg/kg wet	0.01	mg/kg wet							
LCS (BAJ0198-BS1)				Prepared & Analyzed: 10/06/2017						
Cyanide	0.25 mg/L	0.01	mg/L	0.250 mg/L		98.3	80-120			
LCS Dup (BAJ0198-BSD1)				Prepared & Analyzed: 10/06/2017						
Cyanide	0.25 mg/L	0.01	mg/L	0.250 mg/L		102	80-120	3.60	20	
Matrix Spike (BAJ0198-MS1)		**Source: 17J0144-02**		Prepared & Analyzed: 10/06/2017						
Cyanide	22.6 mg/kg dry	1.06	mg/kg dry	26.4	<1.06 mg/kg dry	85.7	75-125			
Matrix Spike Dup (BAJ0198-MSD1)		**Source: 17J0144-02**		Prepared & Analyzed: 10/06/2017						
Cyanide	25.3 mg/kg dry	1.06	mg/kg dry	26.4	<1.06 mg/kg dry	96.0	75-125	11.3	20	
Batch BAJ0235 - No Prep Wet Chem										
Blank (BAJ0235-BLK1)				Prepared & Analyzed: 10/09/2017						
Percent Solids	100 %	0.10	%							
Duplicate (BAJ0235-DUP1)		**Source: 17J0229-02**		Prepared & Analyzed: 10/09/2017						
Percent Solids	94.2 %	0.10	%		94.0 %			0.231	20	
Duplicate (BAJ0235-DUP2)		**Source: 17J0274-04**		Prepared & Analyzed: 10/09/2017						
Percent Solids	94.1 %	0.10	%		94.2 %			0.107	20	

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Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Solids	
Antimony	VELAP
Arsenic	VELAP
Barium	VELAP,WVDEP
Beryllium	VELAP
Cadmium	VELAP,WVDEP
Chromium	VELAP
Cobalt	VELAP
Copper	VELAP
Iron	VELAP
Lead	VELAP,WVDEP
Nickel	VELAP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Thallium	VELAP
Vanadium	VELAP
Zinc	VELAP
SW7471B in Solids	
Mercury	VELAP,WVDEP
SW8081B in Solids	
Dieldrin	NC,VELAP
Endosulfan I	NC,VELAP
Endosulfan II	NC,VELAP
Endrin	NC,VELAP
gamma-BHC (Lindane)	NC,VELAP
Heptachlor	NC,VELAP
Heptachlor epoxide	NC,VELAP
Methoxychlor	NC,VELAP
Toxaphene	NC,VELAP
SW8082A in Solids	
PCB as Aroclor 1016	VELAP,NC
PCB as Aroclor 1221	VELAP,NC
PCB as Aroclor 1232	VELAP,NC
PCB as Aroclor 1242	VELAP,NC
PCB as Aroclor 1248	VELAP,NC
PCB as Aroclor 1254	VELAP,NC
PCB as Aroclor 1260	VELAP,NC

AIR WATER & SOIL LABORATORIES, INC.

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Certified Analyses included in this Report

Analyte	Certifications
SW8270D in Solids	
1,2,4-Trichlorobenzene	NC,VELAP,WVDEP
1,2-Dichlorobenzene	NC,VELAP,WVDEP
1,3-Dichlorobenzene	NC,VELAP,WVDEP
1,4-Dichlorobenzene	NC,VELAP,WVDEP
2,4,5-Trichlorophenol	NC,VELAP,WVDEP
2,4,6-Trichlorophenol	NC,VELAP,WVDEP
2,4-Dichlorophenol	NC,VELAP,WVDEP
2,4-Dimethylphenol	NC,VELAP,WVDEP
2,4-Dinitrophenol	NC,VELAP,WVDEP
2,4-Dinitrotoluene	NC,VELAP,WVDEP
2,6-Dinitrotoluene	NC,VELAP,WVDEP
2-Chlorophenol	NC,VELAP,WVDEP
2-Methylnaphthalene	NC,VELAP,WVDEP
3-Nitroaniline	NC,VELAP,WVDEP
4-Chloroaniline	NC,VELAP,WVDEP
4-Nitroaniline	NC,VELAP,WVDEP
Acenaphthene	NC,VELAP,WVDEP
Anthracene	NC,VELAP,WVDEP
Benzo (a) anthracene	NC,VELAP,WVDEP
Benzo (a) pyrene	NC,VELAP,WVDEP
Benzo (b) fluoranthene	NC,VELAP,WVDEP
Benzo (k) fluoranthene	NC,VELAP,WVDEP
bis (2-Chloroethoxy) methane	NC,VELAP,WVDEP
bis (2-Chloroethyl) ether	NC,VELAP,WVDEP
2,2'-Oxybis (1-chloropropane)	NC,VELAP,WVDEP
bis (2-Ethylhexyl) phthalate	NC,VELAP,WVDEP
Butyl benzyl phthalate	NC,VELAP,WVDEP
Chrysene	NC,VELAP,WVDEP
Dibenz (a,h) anthracene	NC,VELAP,WVDEP
Diethyl phthalate	NC,VELAP,WVDEP
Dimethyl phthalate	NC,VELAP,WVDEP
Di-n-butyl phthalate	NC,VELAP,WVDEP
Di-n-octyl phthalate	NC,VELAP,WVDEP
Fluoranthene	NC,VELAP,WVDEP
Fluorene	NC,VELAP,WVDEP
Hexachlorobenzene	NC,VELAP,WVDEP

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Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Certified Analyses included in this Report

Analyte	Certifications
Hexachlorobutadiene	NC,VELAP,WVDEP
Hexachlorocyclopentadiene	NC,VELAP,WVDEP
Hexachloroethane	NC,VELAP,WVDEP
Indeno (1,2,3-cd) pyrene	NC,VELAP,WVDEP
Isophorone	NC,VELAP,WVDEP
m+p-Cresols	NC,VELAP,WVDEP
Naphthalene	NC,VELAP,WVDEP
Nitrobenzene	NC,VELAP,WVDEP
n-Nitrosodi-n-propylamine	NC,VELAP,WVDEP
n-Nitrosodiphenylamine	NC,VELAP,WVDEP
o+m+p-Cresols	NC,VELAP,WVDEP
o-Cresol	NC,VELAP,WVDEP
p-Chloro-m-cresol	NC,VELAP,WVDEP
Pentachlorophenol	NC,VELAP,WVDEP
Phenanthrene	NC,VELAP,WVDEP
Phenol	NC,VELAP,WVDEP
Pyrene	NC,VELAP,WVDEP
SW9012B in Solids	
Cyanide	VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2017
NC	North Carolina DENR	495	12/31/2017
PADEP	NELAC-Pennsylvania	001	10/31/2017
VELAP	NELAC-Virginia Certificate #9439	460021	06/14/2018
WVDEP	West Virginia DEP	350	11/30/2017

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Summary of Data Qualifiers

C	Continuing calibarion verification response for this analyte is outside specifications.
E	Estimated concentration, outside calibration range
L	LCS recovery is outside of established acceptance limits
M	Matrix spike recovery is outside established acceptance limits
P	Duplicate analysis does not meet the acceptance criteria for precision
RPD	Relative Percent Difference
Qual	Qualifers
-RE	Denotes sample was re-analyzed
D.F.	Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
PCBs, Total	Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

CLIENT:	LIESFELD FARMS	CONSULTANT:	DRAPER ADEN ASSOCIATES	COPY COA TO CONSULTANT?	YES
ATTN:	THOMAS LIESFELD	ATTN:	WILLIAM A SALOMONE (WSALOMONE@DAA.COM)	COPY INVOICE TO CONSULTANT?	YES
STREET:	859 BEN HATCHER ROAD	STREET:	8090 VILLA PARK DRIVE	PROJECT:	NKWP / WEANACK LAND RECLAMATION CRITERIA
CITY:	WAYNESBORO, GA 30830	CITY:	RICHMOND, VIRGINIA 23228	LOCATION:	NEW KENT, VIRGINIA
PHONE:	804-833-4286	PHONE:	804-264-2228	LABORATORY:	AIR, WATER, & SOIL LABORATORIES
TURN AROUND:	STANDARD	P.O. #:	R15434R-12	ANALYSES REQUESTED	

LAB USE ONLY	SAMPLE INFORMATION			COMPOSITE	NO. OF JARS	MATRIX	see attached table (exclusion criteria column only)						COMMENTS (SAMPLING INTERVAL)
LAB ID	SAMPLE ID	DATE	TIME										
	EA-1-12	10/4	4:00 pm	X	4	S	X						1-12 INCHES
	EA-1-24	10/4	4:15 pm	X	4	S	X						12-24 INCHES
													PLEASE HOLD TCLP SOILS - PENDING ANALYSIS ON FIRST RUN

SAMPLED BY: Bradley Fitzwater

PRINTED NAME: Bradley Fitzwater

NOTES: Level 2 data package.
Please report all concentrations in mg/kg (dry weight).
All dry weight analyses shall be total analysis.

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME	REASON FOR TRANSPORT
Bradley Fitzwater	10/4/17	17:25	[illegible]	10/4/17	17:25	TO LABORATORY OF CHEMICAL ANALYSIS

TEMP: 2.3°C ~~No~~ BR Sealed On Ice

pH:

CONTENTS: A = AIR; S=SOIL; G=GROUNDWATER; WW=WASTEWATER

Thomas Liesfeld 17J0144
Weanack Dredge Material Screenin
Recd: 10/05/2017 Due: 10/19/2017

v130325002

PART I

A. MONITORING REQUIREMENTS

During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to manage dredge spoils as specified below:

1. Dredge material may be disposed at the Weanack Land Reclamation Project if testing indicates that parameter concentrations are equal to or less than the Exclusion Criteria in the following table. Dredge material may additionally be characterized as "Clean Fill" if parameter concentrations are equal to or less than the Clean Fill criteria in the following table – also see Part I.B.9.

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
Metals					
All dry weight analyses shall be total analysis. Elutriate analyses shall be total recoverable metal unless otherwise noted.					
7440-36-0	Antimony	410	14	5.6 Dissolved	
7440-38-2	Arsenic	41	20	10 Dissolved	
7440-39-3	Barium, Total Recoverable	19,000	700	1,000	
7440-41-7	Beryllium, Total Recoverable	2,000	160		
7440-43-9	Cadmium, Total Recoverable	810	4.98	0.4	
7440-47-3	Chromium, Total Recoverable	1,200	111	50	
16065-83-1	Chromium III, Dissolved			180 Dissolved	
18540-29-9	Chromium VI, Dissolved			16 Dissolved	
7440-48-4	Cobalt, Total Recoverable	300			
7440-50-8	Copper	4,300	149	3.6 Dissolved	
7439-89-6	Iron, Total Recoverable	150,000	150,000	300	
7439-92-1	Lead	800	128	15 Dissolved	
7439-96-5	Manganese, Total Recoverable			50	
7439-97-6	Mercury, Total Recoverable	100	1.06	0.05	1.0
7440-02-0	Nickel	1,000	48.6	56 Dissolved	

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
7782-49-2	Selenium, Total Recoverable	5,100	63	10	
7440-22-4	Silver, Total Recoverable	5,100	110	None	0.20
7440-23-5	Sodium			270,000	
7440-28-0	Thallium	5	1	0.24 Dissolved	1.0
7440-62-2	Vanadium, Total Recoverable	5,200	370		
7440-66-6	Zinc	7,500	459	36 Dissolved	
PCBs					
12674-11-2	Aroclor 1016	21			
11104-28-2	Aroclor 1221	0.62			
11141-16-5	Aroclor 1232	0.62			
53469-21-9	Aroclor 1242	0.74			
12672-29-6	Aroclor 1248	0.74			
11097-69-1	Aroclor 1254	0.74			
11096-82-5	Aroclor 1260	0.74			
1336-36-3	Total PCBs, sum of above 7 Aroclors	25.2	0.49		
1336-36-3	Total PCBs, all congeners		0.676	0.00064	
Pesticides					
309-00-2	Aldrin	0.11	0.04	0.00049	0.05
57-74-9	Chlordane		0.0176	0.008	0.2
2921-88-2	Chloropyrifos			0.083	0.2
72-54-8	DDD	7.2	0.028	0.0031	0.1
72-55-9	DDE	5.1	0.0313	0.0022	0.1
50-29-3	DDT	7	0.0629	0.001	0.1
333-41-5	Diazinon			0.17	
60-57-1	Dieldrin	0.11	0.042	0.00052	0.1
115-29-7	Endosulfan	3,700			
~~959-98-8~~	~~Alpha-Endosulfan~~			~~0.22~~	
33213-65-9	Beta-Endosulfan			0.22	

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
1031-07-8	Endosulfan Sulfate			62	
72-20-8	Endrin	180	0.207	0.004	0.1
7421-93-4	Endrin Aldehyde			0.29	
76-44-8	Heptachlor	0.38	0.15	0.00079	0.05
1024-57-3	Heptachlor Epoxide	0.19	0.016	0.00039	0.05
319-84-6	Hexachlorocyclohexane Alpha-BHC			0.026	0.05
319-85-7	Hexachlorocyclohexane Beta-BHC			0.091	
58-89-9	Hexachlorocyclohexane Gamma-BHC (Lindane)	0.52	0.00499	0.01	0.05
143-50-0	Kepone			None	5
72-43-5	Methoxychlor	3,100	280	0.03	0.05
2385-85-5	Mirex			None	0.05
56-38-2	Parathion			0.065	1
8001-35-2	Toxaphene	1.6	0.1	None	5.0
Base Neutral Extractables					
83-32-9	Acenaphthene	33,000	3,400	670	
120-12-7	Anthracene	170,000	0.845	8,300	
92-87-5	Benzidine			0.00086	5
56-55-3	Benzo(a)anthracene	2.1	0.9	0.038	10.0
205-99-2	Benzo(b)fluoranthene	2.1	0.9	0.038	10.0
207-08-9	Benzo(k)fluoranthene	21	0.9	0.038	10.0
50-32-8	Benzo(a)pyrene	0.66	0.21	0.038	10.0
111-91-1	Bis-2-Chloroethoxy Methane	1,800			
111-44-4	Bis-2-Chloroethyl Ether	0.9	0.66	0.30	5
108-60-1	Bis-2-Chloroisopropyl Ether (2,2'-oxybis(1-Chloropropane))	2,300	2,300	1,400	
117-81-7	Bis-2-Ethylhexyl Phthalate	120	49	12	
85-68-7	Butyl Benzyl Phthalate	1,100	910	1,500	
106-47-8	4-Chloroaniline	230	230		

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
91-58-7	2-Chloronaphthalene			1,000	
218-01-9	Chrysene	210	1.29	0.0038	10.0
53-70-3	Dibenz(a,h)anthracene	0.66	0.21	0.038	20.0
84-74-2	Dibutyl Phthalate (Di-n-Butyl Phthalate)	5,700	5,700	2,000	
95-50-1	1,2-Dichlorobenzene	10,000	5,100	420	
541-73-1	1,3-Dichlorobenzene	5,100	5,100	320	
106-46-7	1,4-Dichlorobenzene	570	13	63	
91-94-1	3,3-Dichlorobenzidine	3.8	2	0.21	5
84-66-2	Diethyl Phthalate	490,000	10,000	17,000	
131-11-3	Dimethyl Phthalate	10,000	10,000	270,000	
117-84-0	Di-n-Octyl Phthalate	1,100	1,100		
121-14-2	2,4-Dinitrotoluene	1,200		1.1	10.0
606-20-2	2,6-Dinitrotoluene	620	61		
122-66-7	1,2-Diphenylhydrazine			0.36	5
206-44-0	Fluoranthene	22,000	2.23	130	
86-73-7	Fluorene	22,000	0.536	1,100	
118-74-1	Hexachlorobenzene	1.1	0.66	0.0028	5
87-68-3	Hexachlorobutadiene	22	1	4.4	5
77-47-4	Hexachlorocyclopentadiene	3,700	400	40	
67-72-1	Hexachloroethane	120	6	14	
193-39-5	Indeno(1,2,3-cd)pyrene	2.1	0.9	0.038	20.0
78-59-1	Isophorone	1,800	1,100	350	
91-57-6	2-Methylnaphthalene	4,100			
91-20-3	Naphthalene	230	0.561		
99-09-2	3-Nitroaniline	82			
100-01-6	4-Nitroaniline	82			
98-95-3	Nitrobenzene	280	28	17	
62-75-9	N-Nitrosodimethylamine			0.0069	5

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
621-64-7	N-Nitrosodi-n-propylamine	0.66	0.25	0.05	5
86-30-6	N-Nitrosodiphenylamine	350	140	33	
85-01-8	Phenanthrene		1.17		
120-00-0	Pyrene	17,000	1.52	830	
120-82-1	1,2,4-Trichlorobenzene	400	68	35	
Volatiles					
107-02-8	Acrolein			6.1	50
107-13-1	Acrylonitrile			0.51	50
71-43-2	Benzene			22	
75-25-2	Bromoform			43	
56-23-5	Carbon Tetrachloride			2.3	10.0
108-90-7	Chlorobenzene (Monochlorobenzene)			130	
124-48-1	Chlorodibromomethane			4.0	10.0
67-66-3	Chloroform			340	
75-09-2	Dichloromethane (Methylene Chloride)			46	
75-27-4	Dichlorobromomethane			5.5	10.0
107-06-2	1,2-Dichloroethane			3.8	10.0
75-35-4	1,1-Dichloroethylene			330	
156-60-5	1,2-trans-Dichloroethylene			140	
78-87-5	1,2-Dichloropropane			5.0	5
542-75-6	1,3-Dichloropropene			3.4	5
100-41-4	Ethylbenzene			530	
74-83-9	Methyl Bromide (Bromomethane)			47	
79-34-5	1,1,2,2-Tetrachloroethane			1.7	5
127-18-4	Tetrachloroethylene			6.9	10.0
10-88-3	Toluene			510	
79-00-5	1,1,2-Trichloroethane			5.9	
79-01-6	Trichloroethylene			25	

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
75-01-4	Vinyl Chloride			0.25	10.0
Acid Extractables					
59-50-7	4-Chloro-3-Methylphenol	10,000	10,000		
95-57-8	2-Chlorophenol	5,100	280	81	
120-83-2	2,4-Dichlorophenol	1,800	170	77	
105-67-9	2,4-Dimethylphenol	12,000	1,100	380	
51-28-5	2,4-Dinitrophenol	1,200	110	69	
534-52-1	2-Methyl-4,6-Dinitrophenol			13	
95-48-7	2-Methylphenol	2,800	2,800		
106-44-5	4-Methylphenol	2,800	2,800		
25154-52-3	Nonylphenol			28	
87-86-5	Pentachlorophenol	9	6	2.7	50.0
108-95-2	Phenol	180,000	10,000	10,000	
95-95-4	2,4,5-Trichlorophenol	62,000	5,600		
88-06-2	2,4,6-Trichlorophenol	160	62	14	
Miscellaneous					
776-41-7	Ammonia as NH_3-N			25	200
16887-00-6	Chloride			50,000	
57-12-5	Cyanide, Free			22	
57-12-5	Cyanide, Total	20,000	1,100	5	
94-75-7	2,4-Dichlorophenoxy Acetic Acid (2,4-D)			100	
1746-01-6	Dioxin (2,3,7,8-Tetrachlorodibenzo-p-dioxin)	18 ng/kg	4.3 ng/kg	0.00000005	0.00001
16984-48-8	Fluoride			1,400	
14797-55-8	Nitrate (as N)			5,000	
14797-65-0	Nitrite (as N)			25	
NA	Total Organic Carbon		≤5%	10,000	
NA	Total Petroleum Hydrocarbons			1,000	

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
NA	Total Phenols (phenolic compounds)			1	4
130498-29-2	PAHs Total		22.8		
14808-79-8	Sulfate			50,0000	
60-10-5	Tributylin			0.46	
93-72-1	2-(2,4,5-Trichlorophenoxy) Propionic Acid (Silvex)			10	

* Unless units are otherwise noted

** Maximum Quantification Level where needed to demonstrate compliance. The screening criterion is achieved if the pollutant is not detected at the indicated quantification level.

2. Dredged material to be disposed at the Weanack Land Reclamation Project shall be characterized by composite sampling. The sampling and compositing protocols and the sample results shall be submitted to the Virginia Department of Environmental Quality for review and approval prior to disposal. The source of the dredged material and the volume of material to be disposed at Weanack shall also be submitted.

   Elutriate testing shall utilize the standard elutriate test protocol as described in the U. S. Army Corps of Engineers publication titled "Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual – Inland Testing Manual", February 1998 (EPA-823-B-98-004) except that deionized water shall be used for sample preparation. Alternative testing methods may be used after approval by the staff of the Virginia Department of Environmental Quality.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:18
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Sample Conditions Checklist

Samples Received at:	**2.30°C**
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	Yes
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments

CFA | Cape Fear Analytical LLC
an affiliate of The GEL Group INC

3306 Kitty Hawk Road, Suite 120 Wilmington, NC 28405
P 910.795.0421
www.capefearanalytical.com

October 31, 2017

Ms. Jennifer Sult
Air Water & Soil
1941 Reymet Road
Richmond, Virginia 23237

Re: Dioxin & HRMS PCB's subcontract
Work Order: 11471
SDG: 17J0144

Dear Ms. Sult:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 10, 2017. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at 910-795-0421.

Sincerely,

Cynde Larkins

Cynde Larkins
Project Manager

Purchase Order: 815
Enclosures

AIR WATER & SOIL LABORATORIES, INC.

Cape Fear Analytical

1941 REYMET ROAD
RICHMOND, VIRGINIA 23237
(804) 358-8295 PHONE
(804)358-8297 FAX

Chain of Custody
Form #: F1331
Rev. 2.0
Effective: Jun 28, 2016

CHAIN OF CUSTODY

CFA WO #11471

COMPANY NAME: Air, Water, & Soil Laboratories	INVOICE TO: Same	PROJECT NAME/Quote #: 17J0144
CONTACT: Katrina Cooke	INVOICE CONTACT: Jennifer Sult	SITE NAME:
ADDRESS: 1941 Reymet Road Richmond, VA 23237	INVOICE ADDRESS:	PROJECT NUMBER:
PHONE #: 804-358-8295	INVOICE PHONE #:	P.O. #: 815
FAX #: EMAIL: Support@awslabs.com		Pretreatment Program:
Is sample for compliance reporting? YES NO	Is sample from a chlorinated supply? YES NO	PWS I.D. #:
SAMPLER NAME (PRINT):	SAMPLER SIGNATURE:	**Due Date:**

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other_____

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE) 2,3,7,8,TCDD Only EPA 1613							
1) 17J0144-01 EA-1-12		X				10/4/2017	16:00		S		X							
2) 17J0144-02 EA-1-24		X				10/4/2017	16:15		S		X							
3)																		
4)																		
5)																		
6)																		
7)																		
8)																		
9)																		
10)																		

COMMENTS

Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol

PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)

Due 10/31/2017

RELINQUISHED: [signature]	DATE / TIME 10/09/17 1700	RECEIVED: UPS	DATE / TIME
RELINQUISHED: UPS	DATE / TIME	RECEIVED: Cynde Larkins	DATE / TIME 10 OCT 17 1207 ~~10 OCT 17~~
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package
Level III ☐
Level IV ☐

LAB USE ONLY

COOLER TEMP 4.2 °C

SAMPLE RECEIPT CHECKLIST

Cape Fear Analytical

Client: AWSL	Work Order: 11471
Shipping Company: UPS	Date/Time Received: 10OCT17 ~~09~~ CJ 10/17 1207

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?			✓
Samples identified as Foreign Soil?			✓

DOE Site Sample Packages	Yes	NA	No*
Screened <0.5 mR/hr?		✓	
Samples < 2x background?		✓	

* Notify RSO of any responses in this column immediately.

Air Sample Receipt Specifics	Yes	NA	No
Air sample in shipment?			✓

Air Witness: _____

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other(describe)
2	Chain of Custody documents included with shipment?	✓			
3	Samples requiring cold preservation within 0-6°C?	✓			Preservation Method: (ice bags) blue ice dry ice none other (describe) 4.0 + 0.2 = 4.2°C
4	Aqueous samples found to have visible solids?		✓		Sample IDs, containers affected:
5	Samples requiring chemical preservation at proper pH?		✓		Sample IDs, containers affected and pH observed: If preservative added, Lot#:
6	Samples requiring preservation have no residual chlorine?		✓		Sample IDs, containers affected: If preservative added, Lot#:
7	Samples received within holding time?	✓			Sample IDs, tests affected:
8	Sample IDs on COC match IDs on containers?	✓			Sample IDs, containers affected:
9	Date & time of COC match date & time on containers?	✓			Sample IDs, containers affected:
10	Number of containers received match number indicated on COC?	✓			List type and number of containers / Sample IDs, containers affected: 1 - 8oz clear soil jar per sample.
11	COC form is properly signed in relinquished/received sections?	✓			

Comments:

Temp blank present.

Checklist performed by: Initials: CJ Date: 10OCT17

CF-UD-F-7

High Resolution Dioxins and Furans Analysis

Case Narrative

HDOX Case Narrative
Air Water & Soil (AWSL)
SDG 17J0144
Work Order 11471

Method/Analysis Information

Product:	**TCDD Only by EPA Method 1613B in Solids**
Analytical Method:	EPA Method 1613B
Extraction Method:	SW846 3540C
Analytical Batch Number:	35993
Clean Up Batch Number:	35992
Extraction Batch Number:	35991

Sample Analysis

The following samples were analyzed using the analytical protocol as established in Method 1613B:

Sample ID	Client ID
11471001	17J0144-01 EA-1-12
11471002	17J0144-02 EA-1-24
12019847	Method Blank (MB)
12019848	Laboratory Control Sample (LCS)
12019849	Laboratory Control Sample Duplicate (LCSD)
12019850	11471001(17J0144-01 EA-1-12) Matrix Spike (MS)
12019851	11471001(17J0144-01 EA-1-12) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-002 REV# 14.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement
The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery
The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement
The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation
Sample 11471001 (17J0144-01 EA-1-12)- Batch 35993 was selected for analysis as the matrix spike and matrix spike duplicate.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Technical Information

Holding Time Specifications
CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Nonconformance (NCR) Documentation
A NCR was not required for this SDG.

Manual Integrations
Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction. Manual integrations were required for data files in this SDG.

Sample preparation
No difficulties were encountered during sample preparation.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Certificate of Analysis Report
for

AWSL001 Air Water & Soil

Client SDG: 17J0144 CFA Work Order: 11471

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

K Estimated Maximum Possible Concentration

U Analyte was analyzed for, but not detected above the specified detection limit.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature: Heather Patterson **Name: Heather Patterson**

Date: 31 OCT 2017 **Title: Group Leader**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0144**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**11471001**	**Date Collected:**	**10/04/2017 16:00**	**Matrix:**	**SOIL**
Client Sample:	**1613 TCDD Soil**	**Date Received:**	**10/10/2017 12:07**	**%Moisture:**	**5.1**
Client ID:	**17J0144-01 EA-1-12**			**Prep Basis:**	**Dry Weight**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 09:10**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-4**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10.53 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD	U	1	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		142	200	pg/g	70.7	(37%-137%)
37Cl-2,3,7,8-TCDD		16.0	20.0	pg/g	79.8	(42%-164%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0144**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**11471002**	**Date Collected:**	**10/04/2017 16:15**	**Matrix:**	**SOIL**
Client Sample:	**1613 TCDD Soil**	**Date Received:**	**10/10/2017 12:07**	**%Moisture:**	**5.9**
Client ID:	**17J0144-02 EA-1-24**			**Prep Basis:**	**Dry Weight**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 11:31**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-7**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10.64 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD	U	0.999	pg/g	0.999

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		166	200	pg/g	83.0	(37%-137%)
37Cl-2,3,7,8-TCDD		17.4	20.0	pg/g	87.2	(42%-164%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Quality Control Summary

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 17J0144

Matrix Type: SOLID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12019848	LCS for batch 35991	13C-2,3,7,8-TCDD		80.3	(20%-175%)
		37Cl-2,3,7,8-TCDD		89.8	(31%-191%)
12019849	LCSD for batch 35991	13C-2,3,7,8-TCDD		73.5	(20%-175%)
		37Cl-2,3,7,8-TCDD		84.0	(31%-191%)
12019847	MB for batch 35991	13C-2,3,7,8-TCDD		74.8	(25%-164%)
		37Cl-2,3,7,8-TCDD		82.5	(35%-197%)
11471001	17J0144-01 EA-1-12	13C-2,3,7,8-TCDD		70.7	(37%-137%)
		37Cl-2,3,7,8-TCDD		79.8	(42%-164%)
12019850	17J0144-01 EA-1-12(11471001MS)	13C-2,3,7,8-TCDD		82.9	(37%-137%)
		37Cl-2,3,7,8-TCDD		92.7	(42%-164%)
12019851	17J0144-01 EA-1-12(11471001MSD)	13C-2,3,7,8-TCDD		80.3	(37%-137%)
		37Cl-2,3,7,8-TCDD		81.0	(42%-164%)
11471002	17J0144-02 EA-1-24	13C-2,3,7,8-TCDD		83.0	(37%-137%)
		37Cl-2,3,7,8-TCDD		87.2	(42%-164%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number: 17J0144
Client ID: LCS for batch 35991
Lab Sample ID: 12019848
Instrument: HRP750
Analyst: MJC

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 10/27/2017 06:50
Dilution: 1
Prep Batch ID: 35991
Batch ID: 35993

CAS No.		Parmname	Amount Added pg/g	Spike Conc. pg/g	Recovery %	Acceptance Limits
1746-01-6	LCS	2,3,7,8-TCDD	20.0	21.9	110	67-158

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number: 17J0144
Client ID: LCSD for batch 35991
Lab Sample ID: 12019849
Instrument: HRP750
Analyst: MJC

Sample Type: Laboratory Control Sample Duplicate
Matrix: SOIL
Analysis Date: 10/27/2017 07:36
Dilution: 1
Prep Batch ID: 35991
Batch ID: 35993

CAS No.		Parmname	Amount Added pg/g	Spike Conc. pg/g	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	LCSD	2,3,7,8-TCDD	20.0	20.0	99.8	67-158	9.37	0-20

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number:	**17J0144**	**Sample Type:**	**Matrix Spike**	
Client ID:	**17J0144-01 EA-1-12(11471001MS)**	**Matrix:**	**SOIL**	
Lab Sample ID:	**12019850**	**%Moisture:**	**5.1**	
Instrument:	**HRP750**	**Analysis Date:**	**10/27/2017 09:57**	**Dilution: 1**
Analyst:	**MJC**	**Prep Batch ID:**	**35991**	
		Batch ID:	**35993**	

CAS No.		Parmname	Amount Added pg/g		Spike Conc. pg/g	Recovery %	Acceptance Limits
1746-01-6	MS	2,3,7,8-TCDD	20.0	U	22.7	113	70-130

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number:	**17J0144**	**Sample Type:**	**Matrix Spike Duplicate**
Client ID:	**17J0144-01 EA-1-12(11471001MSD)**	**Matrix:**	**SOIL**
Lab Sample ID:	**12019851**	**%Moisture:**	**5.1**
Instrument:	**HRP750**	**Analysis Date:**	**10/27/2017 10:44**
Analyst:	**MJC**	**Prep Batch ID:**	**35991**
		Batch ID:	**35993**

Dilution: 1

CAS No.		Parmname	Amount Added pg/g		Spike Conc. pg/g	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	MSD	2,3,7,8-TCDD	20.0	U	20.8	104	70-130	8.82	0-20

Method Blank Summary

SDG Number:	**17J0144**	**Client:**	**AWSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 35991**	**Instrument ID:**	**HRP750**	**Data File:**	**A26OCT17E_3-3**
Lab Sample ID:	**12019847**	**Prep Date:**	**23-OCT-17**	**Analyzed:**	**10/27/17 08:23**
Column:					

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 35991	12019848	A26OCT17E_3-1	10/27/17	0650
02	LCSD for batch 35991	12019849	A26OCT17E_3-2	10/27/17	0736
03	17J0144-01 EA-1-12	11471001	A26OCT17E_3-4	10/27/17	0910
04	17J0144-01 EA-1-12(11471001MS)	12019850	A26OCT17E_3-5	10/27/17	0957
05	17J0144-01 EA-1-12(11471001MSD)	12019851	A26OCT17E_3-6	10/27/17	1044
06	17J0144-02 EA-1-24	11471002	A26OCT17E_3-7	10/27/17	1131

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0144**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**12019847**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 35991**				
Client ID:	**MB for batch 35991**			**Prep Basis:**	**As Received**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 08:23**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-3**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD	U	1	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		150	200	pg/g	74.8	(25%-164%)
37Cl-2,3,7,8-TCDD		16.5	20.0	pg/g	82.5	(35%-197%)

Comments:

K **Estimated Maximum Possible Concentration**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0144**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**12019848**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 35991**				
Client ID:	**LCS for batch 35991**			**Prep Basis:**	**As Received**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 06:50**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-1**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD		21.9	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		161	200	pg/g	80.3	(20%-175%)
37Cl-2,3,7,8-TCDD		18.0	20.0	pg/g	89.8	(31%-191%)

Comments:

U **Analyte was analyzed for, but not detected above the specified detection limit.**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0144**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**12019849**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 35991**				
Client ID:	**LCSD for batch 35991**			**Prep Basis:**	**As Received**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 07:36**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-2**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD		20.0	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		147	200	pg/g	73.5	(20%-175%)
37Cl-2,3,7,8-TCDD		16.8	20.0	pg/g	84.0	(31%-191%)

Comments:

U **Analyte was analyzed for, but not detected above the specified detection limit.**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0144**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**12019850**	**Date Collected:**	**10/04/2017 16:00**	**Matrix:**	**SOIL**
Client Sample:	**QC for batch 35991**	**Date Received:**	**10/10/2017 12:07**	**%Moisture:**	**5.1**
Client ID:	**17J0144-01 EA-1-12(11471001MS)**			**Prep Basis:**	**Dry Weight**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 09:57**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-5**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10.52 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD		22.7	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		166	200	pg/g	82.9	(37%-137%)
37Cl-2,3,7,8-TCDD		18.6	20.0	pg/g	92.7	(42%-164%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0144**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**12019851**	**Date Collected:**	**10/04/2017 16:00**	**Matrix:**	**SOIL**
Client Sample:	**QC for batch 35991**	**Date Received:**	**10/10/2017 12:07**	**%Moisture:**	**5.1**
Client ID:	**17J0144-01 EA-1-12(11471001MSD)**			**Prep Basis:**	**Dry Weight**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 10:44**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-6**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10.52 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD		20.8	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		161	200	pg/g	80.3	(37%-137%)
37Cl-2,3,7,8-TCDD		16.2	20.0	pg/g	81.0	(42%-164%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Final Lab Results (Air Water & Soil)

Weanack Land Criteria

Composite Sample ID's

EA-3 -12

EA-3-24

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Certificate of Analysis

Final Report

Laboratory Order ID 17J0229

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro, GA 30830	Date Received:	October 5, 2017 16:25
		Date Issued:	November 3, 2017 9:23
		Project Number:	[none]
Submitted To:	Thomas Liesfeld	Purchase Order:	R15434R-12
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria		

Enclosed are the results of analyses for samples received by the laboratory on 10/05/2017 16:25. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

Mandy Mishra
Lab Director/Quality Assurance Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 17J0229

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EA-3-12	17J0229-01	Soil	10/05/2017 15:00	10/05/2017 16:25
EA-3-24	17J0229-02	Soil	10/05/2017 15:15	10/05/2017 16:25

Results have been calculated based on dry weight.

4-Methylphenol is equal to and reported as 3/4-Methylphenol.

Analysis for 2,3,7,8 TCDD was subcontracted to Cape Fear Analytical. The subcontracted results are attached at the end of this Certificate of Analysis.

This Certificate of Analysis is being reissued on November 3, 2017 to report Pesicide and SVOC in mg/kg.

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0229

Analytical Results

Sample I.D. EA-3-12 **Laboratory Sample ID:** 17J0229-01

Composite Start-End Date/Time: 10/05/2017 15:00 - 10/05/2017 15:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010C	<0.512 mg/kg dry		0.512	1	10/06/17 11:00	10/06/17 17:39	CWO
Arsenic	01	SW6010C	**16.2 mg/kg dry**		1.02	1	10/06/17 11:00	10/06/17 17:39	CWO
Barium	01	SW6010C	**21.2 mg/kg dry**		0.512	1	10/06/17 11:00	10/06/17 17:39	CWO
Beryllium	01	SW6010C	<0.205 mg/kg dry		0.205	1	10/06/17 11:00	10/06/17 17:39	CWO
Cadmium	01	SW6010C	**0.443 mg/kg dry**		0.205	1	10/06/17 11:00	10/06/17 17:39	CWO
Cobalt	01	SW6010C	**1.25 mg/kg dry**		0.205	1	10/06/17 11:00	10/06/17 17:39	CWO
Chromium	01	SW6010C	**28.6 mg/kg dry**		0.512	1	10/06/17 11:00	10/06/17 17:39	CWO
Copper	01	SW6010C	**12.9 mg/kg dry**		2.56	1	10/06/17 11:00	10/06/17 17:39	CWO
Iron	01RE1	SW6010C	**5860 mg/kg dry**		256	100	10/06/17 11:00	10/06/17 17:27	CWO
Mercury	01	SW7471B	**0.010 mg/kg dry**		0.008	1	10/12/17 09:50	10/13/17 08:23	RCV
Nickel	01	SW6010C	**2.89 mg/kg dry**		0.512	1	10/06/17 11:00	10/06/17 17:39	CWO
Lead	01	SW6010C	**5.79 mg/kg dry**		0.512	1	10/06/17 11:00	10/06/17 17:39	CWO
Antimony	01	SW6010C	<5.12 mg/kg dry		5.12	1	10/06/17 11:00	10/06/17 17:39	CWO
Selenium	01	SW6010C	<2.56 mg/kg dry		2.56	1	10/06/17 11:00	10/06/17 17:39	CWO
Thallium	01	SW6010C	<2.56 mg/kg dry		2.56	1	10/06/17 11:00	10/06/17 17:39	CWO
Vanadium	01	SW6010C	**10.3 mg/kg dry**		0.512	1	10/06/17 11:00	10/06/17 17:39	CWO
Zinc	01	SW6010C	**10.6 mg/kg dry**		0.512	1	10/06/17 11:00	10/06/17 17:39	CWO
Semivolatile Organic Compounds by GCMS									
1,2,4-Trichlorobenzene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
1,2-Dichlorobenzene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
1,3-Dichlorobenzene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
1,4-Dichlorobenzene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
2,4,5-Trichlorophenol	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
2,4,6-Trichlorophenol	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
2,4-Dichlorophenol	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
2,4-Dimethylphenol	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0229

Analytical Results

Sample I.D. EA-3-12 **Laboratory Sample ID:** 17J0229-01

Composite Start-End Date/Time: 10/05/2017 15:00 - 10/05/2017 15:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrophenol	01	SW8270D	<0.0861 mg/kg dry	C	0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
2,4-Dinitrotoluene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
2,6-Dinitrotoluene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
2-Chlorophenol	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
2-Methylnaphthalene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
3,3'-Dichlorobenzidine	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
3-Nitroaniline	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
4-Chloroaniline	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
4-Nitroaniline	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Acenaphthene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Anthracene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Benzo (a) anthracene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Benzo (a) pyrene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Benzo (b) fluoranthene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Benzo (k) fluoranthene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
bis (2-Chloroethoxy) methane	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
bis (2-Chloroethyl) ether	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
bis (2-chloroisopropyl) ether	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
bis (2-Ethylhexyl) phthalate	01	SW8270D	<0.0861 mg/kg dry	C	0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Butyl benzyl phthalate	01	SW8270D	<0.0861 mg/kg dry	C	0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Chrysene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Dibenz (a,h) anthracene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Diethyl phthalate	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Dimethyl phthalate	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Di-n-butyl phthalate	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Di-n-octyl phthalate	01	SW8270D	<0.0861 mg/kg dry	C	0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0229

Analytical Results

Sample I.D. EA-3-12 **Laboratory Sample ID:** 17J0229-01

Composite Start-End Date/Time: 10/05/2017 15:00 - 10/05/2017 15:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluoranthene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Fluorene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Hexachlorobenzene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Hexachlorobutadiene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Hexachlorocyclopentadiene	01	SW8270D	<0.0861 mg/kg dry	C	0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Hexachloroethane	01	SW8270D	<0.0861 mg/kg dry	C	0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Indeno (1,2,3-cd) pyrene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Isophorone	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
4-Methylphenol	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Naphthalene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Nitrobenzene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
n-Nitrosodi-n-propylamine	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
n-Nitrosodiphenylamine	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
o+m+p-Cresols	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
2-Methylphenol	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
4-Chloro-3-methylphenol	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Pentachlorophenol	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Phenanthrene	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Phenol	01	SW8270D	<0.0861 mg/kg dry		0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Pyrene	01	SW8270D	<0.0861 mg/kg dry	C	0.0861	1	10/09/17 09:20	10/09/17 16:14	SKS
Surr: 2,4,6-Tribromophenol (Surr)	*01*	*SW8270D*	*72.6 %*		*35-125*		*10/09/17 09:20*	*10/09/17 16:14*	*SKS*
Surr: 2-Fluorobiphenyl (Surr)	*01*	*SW8270D*	*69.5 %*		*45-105*		*10/09/17 09:20*	*10/09/17 16:14*	*SKS*
Surr: 2-Fluorophenol (Surr)	*01*	*SW8270D*	*65.8 %*		*35-105*		*10/09/17 09:20*	*10/09/17 16:14*	*SKS*
Surr: Nitrobenzene-d5 (Surr)	*01*	*SW8270D*	*62.1 %*		*35-100*		*10/09/17 09:20*	*10/09/17 16:14*	*SKS*
Surr: Phenol-d5 (Surr)	*01*	*SW8270D*	*63.6 %*		*40-100*		*10/09/17 09:20*	*10/09/17 16:14*	*SKS*
Surr: p-Terphenyl-d14 (Surr)	*01*	*SW8270D*	*49.5 %*		*30-125*		*10/09/17 09:20*	*10/09/17 16:14*	*SKS*

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0229

Analytical Results

Sample I.D. EA-3-12 **Laboratory Sample ID:** 17J0229-01

Composite Start-End Date/Time: 10/05/2017 15:00 - 10/05/2017 15:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	01	SW8082A	<0.103 mg/kg dry		0.103	1	10/16/17 13:10	10/17/17 14:45	LBH
PCB as Aroclor 1221	01	SW8082A	<0.103 mg/kg dry		0.103	1	10/16/17 13:10	10/17/17 14:45	LBH
PCB as Aroclor 1232	01	SW8082A	<0.103 mg/kg dry		0.103	1	10/16/17 13:10	10/17/17 14:45	LBH
PCB as Aroclor 1242	01	SW8082A	<0.103 mg/kg dry		0.103	1	10/16/17 13:10	10/17/17 14:45	LBH
PCB as Aroclor 1248	01	SW8082A	<0.103 mg/kg dry		0.103	1	10/16/17 13:10	10/17/17 14:45	LBH
PCB as Aroclor 1254	01	SW8082A	<0.103 mg/kg dry		0.103	1	10/16/17 13:10	10/17/17 14:45	LBH
PCB as Aroclor 1260	01	SW8082A	<0.103 mg/kg dry		0.103	1	10/16/17 13:10	10/17/17 14:45	LBH
PCBs, Total	01	SW8082A	<0.927 mg/kg dry		0.927	1	10/16/17 13:10	10/17/17 14:45	LBH
Surr: DCB	*01*	*SW8082A*	*80.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 14:45*	*LBH*
Surr: TCMX	*01*	*SW8082A*	*75.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 14:45*	*LBH*
4,4'-DDD	01	SW8081B	<0.00618 mg/kg dry		0.00618	1	10/16/17 13:10	10/17/17 14:45	LBH
4,4'-DDE	01	SW8081B	<0.00412 mg/kg dry		0.00412	1	10/16/17 13:10	10/17/17 14:45	LBH
4,4'-DDT	01	SW8081B	<0.00412 mg/kg dry		0.00412	1	10/16/17 13:10	10/17/17 14:45	LBH
Aldrin	01	SW8081B	<0.00206 mg/kg dry		0.00206	1	10/16/17 13:10	10/17/17 14:45	LBH
Dieldrin	01	SW8081B	<0.00412 mg/kg dry		0.00412	1	10/16/17 13:10	10/17/17 14:45	LBH
Endosulfan I	01	SW8081B	<0.00412 mg/kg dry		0.00412	1	10/16/17 13:10	10/17/17 14:45	LBH
Endosulfan II	01	SW8081B	<0.00618 mg/kg dry		0.00618	1	10/16/17 13:10	10/17/17 14:45	LBH
Endrin	01	SW8081B	<0.00412 mg/kg dry		0.00412	1	10/16/17 13:10	10/17/17 14:45	LBH
gamma-BHC (Lindane)	01	SW8081B	<0.00206 mg/kg dry		0.00206	1	10/16/17 13:10	10/17/17 14:45	LBH
Heptachlor	01	SW8081B	<0.00206 mg/kg dry		0.00206	1	10/16/17 13:10	10/17/17 14:45	LBH

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0229

Analytical Results

Sample I.D. EA-3-12 **Laboratory Sample ID:** 17J0229-01

Composite Start-End Date/Time: 10/05/2017 15:00 - 10/05/2017 15:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Heptachlor epoxide	01	SW8081B	<0.0412 mg/kg dry		0.0412	1	10/16/17 13:10	10/17/17 14:45	LBH
Methoxychlor	01	SW8081B	<0.0412 mg/kg dry		0.0412	1	10/16/17 13:10	10/17/17 14:45	LBH
Toxaphene	01	SW8081B	<0.0433 mg/kg dry		0.0433	1	10/16/17 13:10	10/17/17 14:45	LBH
Surr: TCMX	*01*	*SW8081B*	*70.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 14:45*	*LBH*
Surr: DCB	*01*	*SW8081B*	*80.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 14:45*	*LBH*
Wet Chemistry Analysis									
Cyanide	01	SW9012B	<0.96 mg/kg dry		0.96	1	10/19/17 15:17	10/19/17 15:17	BBP
Percent Solids	01	SM18 2540G	**95.2 %**		0.10	1	10/09/17 17:35	10/09/17 17:35	JCM

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Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0229

Analytical Results

Sample I.D. EA-3-24 **Laboratory Sample ID:** 17J0229-02

Composite Start-End Date/Time: 10/05/2017 15:15 - 10/05/2017 15:15

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02	SW6010C	<0.500 mg/kg dry		0.500	1	10/06/17 11:00	10/06/17 17:41	CWO
Arsenic	02	SW6010C	**39.1 mg/kg dry**		1.00	1	10/06/17 11:00	10/06/17 17:41	CWO
Barium	02	SW6010C	**24.0 mg/kg dry**		0.500	1	10/06/17 11:00	10/06/17 17:41	CWO
Beryllium	02	SW6010C	<0.200 mg/kg dry		0.200	1	10/06/17 11:00	10/06/17 17:41	CWO
Cadmium	02	SW6010C	**0.485 mg/kg dry**		0.200	1	10/06/17 11:00	10/06/17 17:41	CWO
Cobalt	02	SW6010C	**1.25 mg/kg dry**		0.200	1	10/06/17 11:00	10/06/17 17:41	CWO
Chromium	02	SW6010C	**49.3 mg/kg dry**		0.500	1	10/06/17 11:00	10/06/17 17:41	CWO
Copper	02	SW6010C	**24.0 mg/kg dry**		2.50	1	10/06/17 11:00	10/06/17 17:41	CWO
Iron	02RE1	SW6010C	**6180 mg/kg dry**		250	100	10/06/17 11:00	10/06/17 17:29	CWO
Mercury	02	SW7471B	**0.010 mg/kg dry**		0.008	1	10/12/17 09:50	10/13/17 08:26	RCV
Nickel	02	SW6010C	**2.91 mg/kg dry**		0.500	1	10/06/17 11:00	10/06/17 17:41	CWO
Lead	02	SW6010C	**8.10 mg/kg dry**		0.500	1	10/06/17 11:00	10/06/17 17:41	CWO
Antimony	02	SW6010C	<5.00 mg/kg dry		5.00	1	10/06/17 11:00	10/06/17 17:41	CWO
Selenium	02	SW6010C	<2.50 mg/kg dry		2.50	1	10/06/17 11:00	10/06/17 17:41	CWO
Thallium	02	SW6010C	<2.50 mg/kg dry		2.50	1	10/06/17 11:00	10/06/17 17:41	CWO
Vanadium	02	SW6010C	**11.6 mg/kg dry**		0.500	1	10/06/17 11:00	10/06/17 17:41	CWO
Zinc	02	SW6010C	**14.7 mg/kg dry**		0.500	1	10/06/17 11:00	10/06/17 17:41	CWO
Semivolatile Organic Compounds by GCMS									
1,2,4-Trichlorobenzene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
1,2-Dichlorobenzene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
1,3-Dichlorobenzene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
1,4-Dichlorobenzene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
2,4,5-Trichlorophenol	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
2,4,6-Trichlorophenol	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
2,4-Dichlorophenol	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
2,4-Dimethylphenol	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0229

Analytical Results

Sample I.D. EA-3-24 **Laboratory Sample ID:** 17J0229-02

Composite Start-End Date/Time: 10/05/2017 15:15 - 10/05/2017 15:15

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrophenol	02	SW8270D	<0.350 mg/kg dry	C	0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
2,4-Dinitrotoluene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
2,6-Dinitrotoluene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
2-Chlorophenol	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
2-Methylnaphthalene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
3,3'-Dichlorobenzidine	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
3-Nitroaniline	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
4-Chloroaniline	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
4-Nitroaniline	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Acenaphthene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Anthracene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Benzo (a) anthracene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Benzo (a) pyrene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Benzo (b) fluoranthene	02	SW8270D	**0.357 mg/kg dry**		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Benzo (k) fluoranthene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
bis (2-Chloroethoxy) methane	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
bis (2-Chloroethyl) ether	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
bis (2-chloroisopropyl) ether	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
bis (2-Ethylhexyl) phthalate	02	SW8270D	<0.350 mg/kg dry	C	0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Butyl benzyl phthalate	02	SW8270D	<0.350 mg/kg dry	C	0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Chrysene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Dibenz (a,h) anthracene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Diethyl phthalate	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Dimethyl phthalate	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Di-n-butyl phthalate	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Di-n-octyl phthalate	02	SW8270D	<0.350 mg/kg dry	C	0.350	4	10/09/17 09:20	10/09/17 16:46	SKS

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0229

Analytical Results

Sample I.D. EA-3-24 **Laboratory Sample ID:** 17J0229-02

Composite Start-End Date/Time: 10/05/2017 15:15 - 10/05/2017 15:15

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Fluoranthene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Fluorene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Hexachlorobenzene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Hexachlorobutadiene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Hexachlorocyclopentadiene	02	SW8270D	<0.350 mg/kg dry	C	0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Hexachloroethane	02	SW8270D	<0.350 mg/kg dry	C	0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Indeno (1,2,3-cd) pyrene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Isophorone	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
4-Methylphenol	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Naphthalene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Nitrobenzene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
n-Nitrosodi-n-propylamine	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
n-Nitrosodiphenylamine	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
o+m+p-Cresols	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
2-Methylphenol	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
4-Chloro-3-methylphenol	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Pentachlorophenol	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Phenanthrene	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Phenol	02	SW8270D	<0.350 mg/kg dry		0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Pyrene	02	SW8270D	<0.350 mg/kg dry	C	0.350	4	10/09/17 09:20	10/09/17 16:46	SKS
Surr: 2,4,6-Tribromophenol (Surr)	*02*	*SW8270D*	*47.1 %*		*35-125*		*10/09/17 09:20*	*10/09/17 16:46*	*SKS*
Surr: 2-Fluorobiphenyl (Surr)	*02*	*SW8270D*	*53.2 %*		*45-105*		*10/09/17 09:20*	*10/09/17 16:46*	*SKS*
Surr: 2-Fluorophenol (Surr)	*02*	*SW8270D*	*52.1 %*		*35-105*		*10/09/17 09:20*	*10/09/17 16:46*	*SKS*
Surr: Nitrobenzene-d5 (Surr)	*02*	*SW8270D*	*51.6 %*		*35-100*		*10/09/17 09:20*	*10/09/17 16:46*	*SKS*
Surr: Phenol-d5 (Surr)	*02*	*SW8270D*	*48.2 %*		*40-100*		*10/09/17 09:20*	*10/09/17 16:46*	*SKS*
Surr: p-Terphenyl-d14 (Surr)	*02*	*SW8270D*	*36.9 %*		*30-125*		*10/09/17 09:20*	*10/09/17 16:46*	*SKS*

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0229

Analytical Results

Sample I.D. EA-3-24 **Laboratory Sample ID:** 17J0229-02

Composite Start-End Date/Time: 10/05/2017 15:15 - 10/05/2017 15:15

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	02	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 15:04	LBH
PCB as Aroclor 1221	02	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 15:04	LBH
PCB as Aroclor 1232	02	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 15:04	LBH
PCB as Aroclor 1242	02	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 15:04	LBH
PCB as Aroclor 1248	02	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 15:04	LBH
PCB as Aroclor 1254	02	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 15:04	LBH
PCB as Aroclor 1260	02	SW8082A	<0.104 mg/kg dry		0.104	1	10/16/17 13:10	10/17/17 15:04	LBH
PCBs, Total	02	SW8082A	<0.939 mg/kg dry		0.939	1	10/16/17 13:10	10/17/17 15:04	LBH
Surr: DCB	*02*	*SW8082A*	*100 %*		*30-105*		*10/16/17 13:10*	*10/17/17 15:04*	*LBH*
Surr: TCMX	*02*	*SW8082A*	*75.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 15:04*	*LBH*
4,4'-DDD	02	SW8081B	<0.00626 mg/kg dry		0.00626	1	10/16/17 13:10	10/17/17 15:04	LBH
4,4'-DDE	02	SW8081B	<0.00417 mg/kg dry		0.00417	1	10/16/17 13:10	10/17/17 15:04	LBH
4,4'-DDT	02	SW8081B	<0.00417 mg/kg dry		0.00417	1	10/16/17 13:10	10/17/17 15:04	LBH
Aldrin	02	SW8081B	<0.00209 mg/kg dry		0.00209	1	10/16/17 13:10	10/17/17 15:04	LBH
Dieldrin	02	SW8081B	<0.00417 mg/kg dry		0.00417	1	10/16/17 13:10	10/17/17 15:04	LBH
Endosulfan I	02	SW8081B	<0.00417 mg/kg dry		0.00417	1	10/16/17 13:10	10/17/17 15:04	LBH
Endosulfan II	02	SW8081B	<0.00626 mg/kg dry		0.00626	1	10/16/17 13:10	10/17/17 15:04	LBH
Endrin	02	SW8081B	<0.00417 mg/kg dry		0.00417	1	10/16/17 13:10	10/17/17 15:04	LBH
gamma-BHC (Lindane)	02	SW8081B	<0.00209 mg/kg dry		0.00209	1	10/16/17 13:10	10/17/17 15:04	LBH
Heptachlor	02	SW8081B	<0.00209 mg/kg dry		0.00209	1	10/16/17 13:10	10/17/17 15:04	LBH

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Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Laboratory Order ID: 17J0229

Analytical Results

Sample I.D. EA-3-24 **Laboratory Sample ID:** 17J0229-02

Composite Start-End Date/Time: 10/05/2017 15:15 - 10/05/2017 15:15

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Heptachlor epoxide	02	SW8081B	<0.0417 mg/kg dry		0.0417	1	10/16/17 13:10	10/17/17 15:04	LBH
Methoxychlor	02	SW8081B	<0.0417 mg/kg dry		0.0417	1	10/16/17 13:10	10/17/17 15:04	LBH
Toxaphene	02	SW8081B	<0.0438 mg/kg dry		0.0438	1	10/16/17 13:10	10/17/17 15:04	LBH
Surr: TCMX	*02*	*SW8081B*	*75.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 15:04*	*LBH*
Surr: DCB	*02*	*SW8081B*	*100 %*		*30-105*		*10/16/17 13:10*	*10/17/17 15:04*	*LBH*
Wet Chemistry Analysis									
Cyanide	02	SW9012B	<1.00 mg/kg dry		1.00	1	10/19/17 15:20	10/19/17 15:20	BBP
Percent Solids	02	SM18 2540G	**94.0 %**		0.10	1	10/09/17 17:35	10/09/17 17:35	JCM

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Analytical Summary

Administrative	Preparation Method:
17J0229-01	SW8290
17J0229-02	SW8290

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		**Preparation Method:**	**No Prep Wet Chem**		
17J0229-01	1.00 g / 1.00 mL	SM18 2540G	BAJ0235	SAJ0260	
17J0229-02	1.00 g / 1.00 mL	SM18 2540G	BAJ0235	SAJ0260	
Wet Chemistry Analysis		**Preparation Method:**	**No Prep Wet Chem**		
17J0229-01	1.10 g / 100 mL	SW9012B	BAJ0593	SAJ0539	AJ70095
17J0229-02	1.06 g / 100 mL	SW9012B	BAJ0593	SAJ0539	AJ70095

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		**Preparation Method:**	**SW3050B**		
17J0229-01	1.02 g / 50.0 mL	SW6010C	BAJ0175	SAJ0187	AJ70029
17J0229-01RE1	1.02 g / 50.0 mL	SW6010C	BAJ0175	SAJ0187	AJ70029
17J0229-02	1.06 g / 50.0 mL	SW6010C	BAJ0175	SAJ0187	AJ70029
17J0229-02RE1	1.06 g / 50.0 mL	SW6010C	BAJ0175	SAJ0187	AJ70029

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD		**Preparation Method:**	**SW3550B**		
17J0229-01	30.6 g / 5.00 mL	SW8081B	BAJ0458	SAJ0400	AI70057
17J0229-02	30.6 g / 5.00 mL	SW8081B	BAJ0458	SAJ0400	AI70057
17J0229-01	30.6 g / 5.00 mL	SW8082A	BAJ0458	SAJ0401	AI70058
17J0229-02	30.6 g / 5.00 mL	SW8082A	BAJ0458	SAJ0401	AI70058

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS		**Preparation Method:**	**SW3550C**		
17J0229-01	30.5 g / 1.00 mL	SW8270D	BAJ0226	SAJ0212	AI70063
17J0229-02	30.4 g / 1.00 mL	SW8270D	BAJ0226	SAJ0212	AI70063

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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		**Preparation Method:**	**SW7470A**		
17J0229-01	0.521 g / 20.0 mL	SW7471B	BAJ0350	SAJ0345	AJ70059
17J0229-02	0.505 g / 20.0 mL	SW7471B	BAJ0350	SAJ0345	AJ70059

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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0175 - SW3050B										
Blank (BAJ0175-BLK1)				Prepared & Analyzed: 10/06/2017						
Selenium	<2.50 mg/kg wet	2.50	mg/kg wet							
Lead	<0.500 mg/kg wet	0.500	mg/kg wet							
Beryllium	<0.200 mg/kg wet	0.200	mg/kg wet							
Cobalt	<0.200 mg/kg wet	0.200	mg/kg wet							
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet							
Thallium	<2.50 mg/kg wet	2.50	mg/kg wet							
Barium	<0.500 mg/kg wet	0.500	mg/kg wet							
Antimony	<5.00 mg/kg wet	5.00	mg/kg wet							
Iron	<2.50 mg/kg wet	2.50	mg/kg wet							
Zinc	<0.500 mg/kg wet	0.500	mg/kg wet							
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet							
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet							
Nickel	<0.500 mg/kg wet	0.500	mg/kg wet							
Copper	<2.50 mg/kg wet	2.50	mg/kg wet							
Silver	<0.500 mg/kg wet	0.500	mg/kg wet							
Vanadium	<0.500 mg/kg wet	0.500	mg/kg wet							
LCS (BAJ0175-BS1)				Prepared & Analyzed: 10/06/2017						
Chromium	111 mg/kg wet	0.500	mg/kg wet	99.5	mg/kg wet	112	80-120			
Cobalt	110 mg/kg wet	0.200	mg/kg wet	99.5	mg/kg wet	111	80-120			
Iron	112 mg/kg wet	2.50	mg/kg wet	99.5	mg/kg wet	113	80-120			
Antimony	93.6 mg/kg wet	5.00	mg/kg wet	99.5	mg/kg wet	94.1	80-120			
Thallium	108 mg/kg wet	2.50	mg/kg wet	99.5	mg/kg wet	109	80-120			
Zinc	107 mg/kg wet	0.500	mg/kg wet	99.5	mg/kg wet	107	80-120			
Selenium	102 mg/kg wet	2.50	mg/kg wet	99.5	mg/kg wet	103	80-120			
Lead	109 mg/kg wet	0.500	mg/kg wet	99.5	mg/kg wet	109	80-120			
Nickel	111 mg/kg wet	0.500	mg/kg wet	99.5	mg/kg wet	111	80-120			
Copper	113 mg/kg wet	2.50	mg/kg wet	99.5	mg/kg wet	114	80-120			
Vanadium	111 mg/kg wet	0.500	mg/kg wet	99.5	mg/kg wet	111	80-120			
Silver	5.70 mg/kg wet	0.500	mg/kg wet	4.98	mg/kg wet	115	80-120			
Barium	112 mg/kg wet	0.500	mg/kg wet	99.5	mg/kg wet	112	80-120			

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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0175 - SW3050B										
LCS (BAJ0175-BS1)				Prepared & Analyzed: 10/06/2017						
Beryllium	109 mg/kg wet	0.200	mg/kg wet	99.5	mg/kg wet	110	80-120			
Cadmium	108 mg/kg wet	0.200	mg/kg wet	99.5	mg/kg wet	109	80-120			
Arsenic	109 mg/kg wet	1.00	mg/kg wet	99.5	mg/kg wet	109	80-120			
LCS Dup (BAJ0175-BSD1)				Prepared & Analyzed: 10/06/2017						
Nickel	101 mg/kg wet	0.500	mg/kg wet	92.0	mg/kg wet	109	80-120	9.53	20	
Vanadium	101 mg/kg wet	0.500	mg/kg wet	92.0	mg/kg wet	109	80-120	9.49	20	
Zinc	97.5 mg/kg wet	0.500	mg/kg wet	92.0	mg/kg wet	106	80-120	9.22	20	
Barium	100 mg/kg wet	0.500	mg/kg wet	92.0	mg/kg wet	109	80-120	10.7	20	
Selenium	92.1 mg/kg wet	2.50	mg/kg wet	92.0	mg/kg wet	100	80-120	10.4	20	
Antimony	90.7 mg/kg wet	5.00	mg/kg wet	92.0	mg/kg wet	98.6	80-120	3.15	20	
Beryllium	99.6 mg/kg wet	0.200	mg/kg wet	92.0	mg/kg wet	108	80-120	9.02	20	
Arsenic	97.9 mg/kg wet	1.00	mg/kg wet	92.0	mg/kg wet	106	80-120	10.5	20	
Lead	97.9 mg/kg wet	0.500	mg/kg wet	92.0	mg/kg wet	106	80-120	10.7	20	
Thallium	97.7 mg/kg wet	2.50	mg/kg wet	92.0	mg/kg wet	106	80-120	10.1	20	
Iron	102 mg/kg wet	2.50	mg/kg wet	92.0	mg/kg wet	111	80-120	9.72	20	
Chromium	101 mg/kg wet	0.500	mg/kg wet	92.0	mg/kg wet	110	80-120	9.16	20	
Cadmium	98.8 mg/kg wet	0.200	mg/kg wet	92.0	mg/kg wet	107	80-120	9.33	20	
Copper	103 mg/kg wet	2.50	mg/kg wet	92.0	mg/kg wet	112	80-120	9.22	20	
Silver	5.11 mg/kg wet	0.500	mg/kg wet	4.60	mg/kg wet	111	80-120	10.8	20	
Cobalt	100 mg/kg wet	0.200	mg/kg wet	92.0	mg/kg wet	109	80-120	9.31	20	
Matrix Spike (BAJ0175-MS1)		**Source: 17J0144-01**		Prepared & Analyzed: 10/06/2017						
Zinc	118 mg/kg dry	0.517	mg/kg dry	103	11.7 mg/kg dry	103	75-125			
Silver	5.75 mg/kg dry	0.517	mg/kg dry	5.17	<0.517 mg/kg dry	111	75-125			
Iron	6920 mg/kg dry	2.58	mg/kg dry	103	7740 mg/kg dry	-792	75-125			M, E
Copper	127 mg/kg dry	2.58	mg/kg dry	103	15.5 mg/kg dry	107	75-125			
Arsenic	126 mg/kg dry	1.03	mg/kg dry	103	19.1 mg/kg dry	104	75-125			
Thallium	101 mg/kg dry	2.58	mg/kg dry	103	<2.58 mg/kg dry	97.5	75-125			
Lead	116 mg/kg dry	0.517	mg/kg dry	103	8.99 mg/kg dry	104	75-125			
Cobalt	111 mg/kg dry	0.207	mg/kg dry	103	2.50 mg/kg dry	105	75-125			
Vanadium	121 mg/kg dry	0.517	mg/kg dry	103	11.8 mg/kg dry	106	75-125			

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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0175 - SW3050B										
Matrix Spike (BAJ0175-MS1)		**Source: 17J0144-01**		Prepared & Analyzed: 10/06/2017						
Barium	141 mg/kg dry	0.517	mg/kg dry	103	31.3 mg/kg dry	106	75-125			
Cadmium	107 mg/kg dry	0.207	mg/kg dry	103	0.648 mg/kg dry	103	75-125			
Chromium	140 mg/kg dry	0.517	mg/kg dry	103	36.9 mg/kg dry	99.6	75-125			
Beryllium	107 mg/kg dry	0.207	mg/kg dry	103	<0.207 mg/kg dry	104	75-125			
Nickel	113 mg/kg dry	0.517	mg/kg dry	103	5.49 mg/kg dry	104	75-125			
Selenium	102 mg/kg dry	2.58	mg/kg dry	103	<2.58 mg/kg dry	98.5	75-125			
Antimony	39.0 mg/kg dry	5.17	mg/kg dry	103	<5.17 mg/kg dry	37.7	75-125			M
Matrix Spike Dup (BAJ0175-MSD1)		**Source: 17J0144-01**		Prepared & Analyzed: 10/06/2017						
Iron	6920 mg/kg dry	2.54	mg/kg dry	102	7740 mg/kg dry	-803	75-125	0.0484	20	M, E
Beryllium	107 mg/kg dry	0.203	mg/kg dry	102	<0.203 mg/kg dry	105	75-125	0.274	20	
Silver	5.58 mg/kg dry	0.508	mg/kg dry	5.08	<0.508 mg/kg dry	110	75-125	3.01	20	
Vanadium	120 mg/kg dry	0.508	mg/kg dry	102	11.8 mg/kg dry	106	75-125	0.968	20	
Thallium	98.0 mg/kg dry	2.54	mg/kg dry	102	<2.54 mg/kg dry	96.5	75-125	2.77	20	
Cobalt	108 mg/kg dry	0.203	mg/kg dry	102	2.50 mg/kg dry	104	75-125	2.35	20	
Copper	126 mg/kg dry	2.54	mg/kg dry	102	15.5 mg/kg dry	109	75-125	0.174	20	
Lead	117 mg/kg dry	0.508	mg/kg dry	102	8.99 mg/kg dry	106	75-125	0.475	20	
Antimony	37.8 mg/kg dry	5.08	mg/kg dry	102	<5.08 mg/kg dry	37.2	75-125	3.19	20	M
Selenium	100 mg/kg dry	2.54	mg/kg dry	102	<2.54 mg/kg dry	98.9	75-125	1.38	20	
Chromium	145 mg/kg dry	0.508	mg/kg dry	102	36.9 mg/kg dry	106	75-125	3.32	20	
Cadmium	105 mg/kg dry	0.203	mg/kg dry	102	0.648 mg/kg dry	103	75-125	2.05	20	
Arsenic	126 mg/kg dry	1.02	mg/kg dry	102	19.1 mg/kg dry	105	75-125	0.449	20	
Barium	138 mg/kg dry	0.508	mg/kg dry	102	31.3 mg/kg dry	105	75-125	2.70	20	
Zinc	116 mg/kg dry	0.508	mg/kg dry	102	11.7 mg/kg dry	102	75-125	1.96	20	
Nickel	112 mg/kg dry	0.508	mg/kg dry	102	5.49 mg/kg dry	104	75-125	1.56	20	
Batch BAJ0350 - SW7470A										
Blank (BAJ0350-BLK1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet							

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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0350 - SW7470A										
LCS (BAJ0350-BS1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	0.085 mg/kg wet	0.008	mg/kg wet	0.0852 mg/kg wet		99.5	80-120			
LCS Dup (BAJ0350-BSD1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	0.085 mg/kg wet	0.008	mg/kg wet	0.0846 mg/kg wet		101	80-120	0.694	20	
Matrix Spike (BAJ0350-MS1)		**Source: 17J0274-02**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	0.102 mg/kg dry	0.008	mg/kg dry	0.0909	0.009 mg/kg dry	103	80-120			
Matrix Spike Dup (BAJ0350-MSD1)		**Source: 17J0274-02**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	0.108 mg/kg dry	0.008	mg/kg dry	0.0984	0.009 mg/kg dry	101	80-120	6.09	20	

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Blank (BAJ0226-BLK1)				Prepared & Analyzed: 10/09/2017						
1,2,4-Trichlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1,2-Dichlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1,3-Dichlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1,4-Dichlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4,5-Trichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4,6-Trichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4-Dichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4-Dimethylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4-Dinitrophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4-Dinitrotoluene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,6-Dinitrotoluene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2-Chlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
3,3'-Dichlorobenzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
3-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Chloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Acenaphthene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (a) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (a) pyrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (b) fluoranthene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (k) fluoranthene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
bis (2-Chloroethoxy) methane	<0.0833 mg/kg wet	0.0833	mg/kg wet							
bis (2-Chloroethyl) ether	<0.0833 mg/kg wet	0.0833	mg/kg wet							
bis (2-chloroisopropyl) ether	<0.0833 mg/kg wet	0.0833	mg/kg wet							
bis (2-Ethylhexyl) phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Butyl benzyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Chrysene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Dibenz (a,h) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Diethyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Blank (BAJ0226-BLK1)				Prepared & Analyzed: 10/09/2017						
Dimethyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Di-n-butyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Di-n-octyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Fluoranthene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Fluorene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Hexachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Hexachlorobutadiene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Hexachlorocyclopentadiene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Hexachloroethane	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Indeno (1,2,3-cd) pyrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Isophorone	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Naphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Nitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
n-Nitrosodi-n-propylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
n-Nitrosodiphenylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
o+m+p-Cresols	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Chloro-3-methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Pentachlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Phenanthrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Phenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Pyrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Surr: 2,4,6-Tribromophenol (Surr)	1.40		mg/kg wet	3.31		42.4	35-125			
Surr: 2-Fluorobiphenyl (Surr)	0.797		mg/kg wet	1.66		48.1	45-105			
Surr: 2-Fluorophenol (Surr)	1.59		mg/kg wet	3.31		48.1	35-105			
Surr: Nitrobenzene-d5 (Surr)	0.756		mg/kg wet	1.66		45.6	35-100			
Surr: Phenol-d5 (Surr)	1.48		mg/kg wet	3.31		44.7	40-100			
Surr: p-Terphenyl-d14 (Surr)	0.556		mg/kg wet	1.66		33.6	30-125			

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
LCS (BAJ0226-BS1)				Prepared & Analyzed: 10/09/2017						
1,1-Biphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,2,4,5-Tetrachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,2,4-Trichlorobenzene	2.98 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	93.5	21.8-66.7			L
1,2-Dichlorobenzene	3.04 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	95.4	22-60			L
1,2-Dinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,2-Diphenylhydrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,3,5-Trinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,3-Dichlorobenzene	2.75 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	86.3	22-60			L
1,3-Dinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,4-Dichlorobenzene	2.86 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	89.8	13-68			L
1,4-Dinitrobenzene	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			
1,4-Dioxane	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1,4-Naphthoquinone	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1-Chloronaphthalene	2.90 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
1-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2,3,4,6-Tetrachlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2,3,5,6-Tetrachlorophenol	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			
2,3,7,8-TCDD (SIM)	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2,3-Dichloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet		0-200			
2,4,5-Trichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		50-110			
2,4,6-Trichlorophenol	2.85 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	89.6	50-115			
2,4-Dichlorophenol	3.05 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	95.8	50-105			
2,4-Dimethylphenol	3.07 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	96.2	30-110			
2,4-Dinitrophenol	2.38 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	74.8	15-140			
2,4-Dinitrotoluene	3.07 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	96.3	21-99			
2,6-Dichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2,6-Dinitrotoluene	3.12 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	98.0	15-140			
2-Acetylaminofluorene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2-Chloronaphthalene	2.95 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	92.6	45-105			
2-Chlorophenol	2.66 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	83.4	15-74			L

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
LCS (BAJ0226-BS1)				Prepared & Analyzed: 10/09/2017						
2-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		45-105			
2-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2-Nitrophenol	2.86 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	89.9	40-115			
2-Picoline	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
3,3'-Dichlorobenzidine	3.29 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	103	20-110			
3,3'-Dimethylbenzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
3-Methylcholanthrene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
3-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
4,4'-DDE	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
4,6-Dinitro-2-methylphenol	2.66 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	83.4	40-130			
4-Aminobiphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
4-Bromophenyl phenyl ether	3.26 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	102	15-110			
4-Chloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		15-110			
4-Chlorophenyl phenyl ether	2.98 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	93.5	15-110			
4-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
4-Nitrophenol	2.84 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	89.2	0-125			
4-Nitroquinoline-1-oxide	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
5-Nitro-o-toluidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
7,12-Dimethylbenz (a) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Acenaphthene	2.98 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	93.4	27.7-85.5			L
Acenaphthylene	3.17 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	99.7	50-105			
Acetochlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Acetophenone	2.20 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	69.2	0-200			
Alachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Aldrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
alpha,alpha-Dimethyl phenethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
alpha-Terpineol	3.19 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	100	0-200			
Aniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Anthracene	3.11 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	97.7	55-110			
Aramite	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
LCS (BAJ0226-BS1)				Prepared & Analyzed: 10/09/2017						
Atrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Benzaldehyde	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Benzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet		0-130			
Benzo (a) anthracene	2.96 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	92.9	55-110			
Benzo (a) pyrene	3.07 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	96.5	55-110			
Benzo (b) fluoranthene	3.36 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	106	45-120			
Benzo (g,h,i) perylene	2.87 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	90.2	40-125			
Benzo (k) fluoranthene	3.62 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	114	45-125			
Benzoic acid	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-125			
Benzyl alcohol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
bis (2-Chloroethoxy) methane	3.14 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	98.5	40-125			
bis (2-Chloroethyl) ether	2.92 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	91.6	40-125			
bis (2-chloroisopropyl) ether	2.97 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	93.3	40-125			
bis (2-Ethylhexyl) adipate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
bis (2-Ethylhexyl) phthalate	2.45 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	77.0	40-125			
Butachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Butyl benzyl phthalate	2.27 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	71.1	45-115			
Caprolactam	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Carbazole	4.21 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	132	0-200			
Catechol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Chlorobenzilate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Chrysene	2.94 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	92.4	55-110			
Diallate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Dibenz (a,h) anthracene	3.24 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	102	40-125			
Dibenz (a,j) acridine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Dibenzofuran	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Dieldrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Diethyl phthalate	2.88 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	90.4	40-120			
Dimethoate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Dimethyl phthalate	2.80 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	88.0	25-125			
Dimethylphenethylamine	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
LCS (BAJ0226-BS1)				Prepared & Analyzed: 10/09/2017						
Di-n-butyl phthalate	4.63 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	145	55-115			L
Di-n-octyl phthalate	2.44 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	76.7	35-135			
Dinoseb	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			
Diphenyl ether	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			
Diphenylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Disulfoton	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Endrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
EPTC	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Ethyl methacrylate	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			
Ethyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Ethyl parathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Famphur	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Fluoranthene	3.45 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	108	55-115			
Fluorene	2.93 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	92.0	50-110			
gamma-BHC (Lindane)	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Heptachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Heptachlor epoxide	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Hexachlorobenzene	3.20 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	101	25-125			
Hexachlorobutadiene	3.51 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	110	25-125			
Hexachlorocyclopentadiene	1.63 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	51.3	25-125			
Hexachloroethane	2.72 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	85.3	25-125			
Hexachlorophene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Hexachloropropene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Indeno (1,2,3-cd) pyrene	3.14 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	98.5	45-125			
Isodrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Isophorone	2.92 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	91.5	10-110			
Isosafrole	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Kepone	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Library Search	<0.00 mg/kg wet	0.00	mg/kg wet		mg/kg wet		0-200			
4-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		40-105			
Methapyrilene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
LCS (BAJ0226-BS1)				Prepared & Analyzed: 10/09/2017						
Methoxychlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Methyl methacrylate	<0.00250 mg/kg wet	0.00250	mg/kg wet		mg/kg wet		0-200			
Methyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Methyl parathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Metolachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Metribuzin	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Molinate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Naphthalene	2.96 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	93.1	40-100			
n-Decane	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet		0-200			
Nicotine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Nitrobenzene	2.77 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	86.8	40-100			
n-Nitrosodiethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
n-Nitrosodimethylamine	2.19 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	68.9	25-110			
n-Nitrosodi-n-butylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
n-Nitrosodi-n-propylamine	2.81 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	88.2	12-97			
n-Nitrosodiphenylamine	2.46 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	77.3	12-97			
n-Nitrosomethylethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		25-110			
n-Nitrosomorpholine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
n-Nitrosopiperidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
n-Nitrosopyrrolidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
n-Octadecane	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet		0-200			
Nonylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
o,o,o-Triethyl phosphorothioate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
o,o-Diethyl o-2-pyrazinyl phosphorothioate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
o+m+p-Cresols	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		40-110			
o-Toluidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
p-(Dimethylamino) azobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
4-Chloro-3-methylphenol	2.96 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	92.8	10-91			L
Pentachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Pentachloroethane	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
LCS (BAJ0226-BS1)				Prepared & Analyzed: 10/09/2017						
Pentachloronitrobenzene (quintozene)	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Pentachlorophenol	2.18 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	68.4	30-109			
Phenacetin	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Phenanthrene	3.10 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	97.3	50-115			
Phenol	2.67 mg/kg wet	0.0833	mg/kg wet	3.22	mg/kg wet	83.0	0-115			
Phorate	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
p-Phenylenediamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Pronamide	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Propachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Pyrene	2.36 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	74.1	27-110			
Pyridine	1.85 mg/kg wet	0.0833	mg/kg wet	3.18	mg/kg wet	58.2	0-200			
Safrole	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Simazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Sulfotepp	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Terbacil	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Malathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
Surr: 2,4,6-Tribromophenol (Surr)	3.17		mg/kg wet	3.18	mg/kg wet	99.5	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1.45		mg/kg wet	1.59	mg/kg wet	91.2	45-105			
Surr: 2-Fluorophenol (Surr)	2.10		mg/kg wet	3.18	mg/kg wet	66.0	35-105			
Surr: Nitrobenzene-d5 (Surr)	1.37		mg/kg wet	1.59	mg/kg wet	86.2	35-100			
Surr: Phenol-d5 (Surr)	2.79		mg/kg wet	3.18	mg/kg wet	87.5	40-100			
Surr: p-Terphenyl-d14 (Surr)	0.939		mg/kg wet	1.59	mg/kg wet	59.0	30-125			
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
1,1-Biphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1,2,4,5-Tetrachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1,2,4-Trichlorobenzene	2.09 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	66.9	21.8-66.7			M
1,2-Dichlorobenzene	2.15 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.9	22-60			M
1,2-Dinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1,2-Diphenylhydrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1,3,5-Trinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			

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Final Report

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
1,3-Dichlorobenzene	1.96 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	62.7	22-60			M
1,3-Dinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1,4-Dichlorobenzene	2.02 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	64.7	22-60			M
1,4-Dinitrobenzene	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
1,4-Dioxane	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1,4-Naphthoquinone	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1-Chloronaphthalene	2.10 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
1-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2,3,4,6-Tetrachlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2,3,5,6-Tetrachlorophenol	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
2,3,7,8-TCDD (SIM)	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2,3-Dichloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet		0-200			
2,4,5-Trichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		50-110			
2,4,6-Trichlorophenol	2.12 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	67.9	50-115			
2,4-Dichlorophenol	2.32 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	74.1	50-105			
2,4-Dimethylphenol	2.17 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	69.6	30-110			
2,4-Dinitrophenol	1.89 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	60.4	15-140			
2,4-Dinitrotoluene	2.26 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	72.2	17-111			
2,6-Dichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2,6-Dinitrotoluene	2.27 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	72.6	15-140			
2-Acetylaminofluorene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2-Chloronaphthalene	2.13 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.1	45-105			
2-Chlorophenol	1.98 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	63.5	19-64			
2-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		45-105			
2-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2-Nitrophenol	2.26 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	72.3	40-115			
2-Picoline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
3,3'-Dichlorobenzidine	2.51 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	80.4	20-110			
3,3'-Dimethylbenzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
3-Methylcholanthrene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
3-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
4,4'-DDE	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
4,6-Dinitro-2-methylphenol	2.06 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	65.8	40-130			
4-Aminobiphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
4-Bromophenyl phenyl ether	2.37 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	75.9	15-110			
4-Chloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		15-110			
4-Chlorophenyl phenyl ether	2.16 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	69.2	15-110			
4-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
4-Nitrophenol	2.27 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	72.7	0-125			
4-Nitroquinoline-1-oxide	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
5-Nitro-o-toluidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
7,12-Dimethylbenz (a) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Acenaphthene	2.14 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.5	24-90			
Acenaphthylene	2.27 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	72.8	50-105			
Acetochlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Acetophenone	1.76 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	56.2	0-200			
Alachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Aldrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
alpha,alpha-Dimethyl phenethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
alpha-Terpineol	2.31 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	73.8	0-200			
Aniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Anthracene	2.16 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	69.0	55-110			
Aramite	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Atrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Benzaldehyde	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Benzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet		0-130			
Benzo (a) anthracene	2.23 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	71.3	55-110			
Benzo (a) pyrene	2.26 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	72.4	55-110			
Benzo (b) fluoranthene	2.31 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	74.0	45-120			
Benzo (g,h,i) perylene	1.81 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	57.9	40-125			

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
Benzo (k) fluoranthene	2.40 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	76.9	45-125			
Benzoic acid	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-125			
Benzyl alcohol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
bis (2-Chloroethoxy) methane	2.31 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	73.9	40-125			
bis (2-Chloroethyl) ether	2.16 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	69.0	40-125			
bis (2-chloroisopropyl) ether	2.14 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.4	40-125			
bis (2-Ethylhexyl) adipate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
bis (2-Ethylhexyl) phthalate	1.75 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	55.9	40-125			
Butachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Butyl benzyl phthalate	1.68 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	53.7	45-115			
Caprolactam	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Carbazole	3.11 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	99.5	0-200			
Catechol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Chlorobenzilate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Chrysene	2.12 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	67.9	55-110			
Diallate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Dibenz (a,h) anthracene	2.13 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.1	40-125			
Dibenz (a,j) acridine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Dibenzofuran	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Dieldrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Diethyl phthalate	2.05 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	65.7	40-120			
Dimethoate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Dimethyl phthalate	2.03 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	65.1	25-125			
Dimethylphenethylamine	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
Di-n-butyl phthalate	2.60 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	83.3	55-115			
Di-n-octyl phthalate	1.69 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	54.0	35-135			
Dinoseb	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
Diphenyl ether	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
Diphenylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Disulfoton	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Endrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
EPTC	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Ethyl methacrylate	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
Ethyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Ethyl parathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Famphur	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Fluoranthene	2.44 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	78.0	55-115			
Fluorene	2.15 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.7	50-110			
gamma-BHC (Lindane)	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Heptachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Heptachlor epoxide	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Hexachlorobenzene	2.32 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	74.3	25-125			
Hexachlorobutadiene	2.43 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	77.7	25-125			
Hexachlorocyclopentadiene	0.882 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	28.2	25-125			
Hexachloroethane	1.95 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	62.4	25-125			
Hexachlorophene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Hexachloropropene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Indeno (1,2,3-cd) pyrene	2.06 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	65.8	45-125			
Isodrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Isophorone	2.15 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	68.9	10-110			
Isosafrole	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Kepone	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Library Search	<0.00 mg/kg wet	0.00	mg/kg wet		<0.00 mg/kg wet		0-200			
4-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		40-105			
Methapyrilene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Methoxychlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Methyl methacrylate	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200			
Methyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Methyl parathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Metolachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Metribuzin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Molinate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
Naphthalene	2.08 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	66.5	40-100			
n-Decane	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet		0-200			
Nicotine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Nitrobenzene	2.00 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	64.0	40-100			
n-Nitrosodiethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
n-Nitrosodimethylamine	1.71 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	54.7	25-110			
n-Nitrosodi-n-butylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
n-Nitrosodi-n-propylamine	2.07 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	66.2	12-97			
n-Nitrosodiphenylamine	1.79 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	57.3	12-97			
n-Nitrosomethylethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		25-110			
n-Nitrosomorpholine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
n-Nitrosopiperidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
n-Nitrosopyrrolidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
n-Octadecane	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet		0-200			
Nonylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
o,o,o-Triethyl phosphorothioate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
o,o-Diethyl o-2-pyrazinyl phosphorothioate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
o+m+p-Cresols	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
2-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		40-110			
o-Toluidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
p-(Dimethylamino) azobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
4-Chloro-3-methylphenol	2.20 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	70.5	10-91			
Pentachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Pentachloroethane	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Pentachloronitrobenzene (quintozene)	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Pentachlorophenol	2.04 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	65.4	27-109			
Phenacetin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Phenanthrene	2.25 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	71.9	50-115			
Phenol	1.98 mg/kg wet	0.0833	mg/kg wet	3.16	<0.0833 mg/kg wet	62.8	0-115			
Phorate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
p-Phenylenediamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike (BAJ0226-MS1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
Pronamide	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Propachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Pyrene	1.78 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	57.1	23-110			
Pyridine	0.395 mg/kg wet	0.0833	mg/kg wet	3.12	<0.0833 mg/kg wet	12.6	0-200			
Safrole	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Simazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Sulfotepp	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Terbacil	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Malathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200			
Surr: 2,4,6-Tribromophenol (Surr)	2.45		mg/kg wet	3.12	mg/kg wet	78.4	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1.03		mg/kg wet	1.56	mg/kg wet	66.1	45-105			
Surr: 2-Fluorophenol (Surr)	2.16		mg/kg wet	3.12	mg/kg wet	69.2	35-105			
Surr: Nitrobenzene-d5 (Surr)	1.01		mg/kg wet	1.56	mg/kg wet	64.7	35-100			
Surr: Phenol-d5 (Surr)	2.09		mg/kg wet	3.12	mg/kg wet	67.0	40-100			
Surr: p-Terphenyl-d14 (Surr)	0.744		mg/kg wet	1.56	mg/kg wet	47.6	30-125			
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
1,1-Biphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,2,4,5-Tetrachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,2,4-Trichlorobenzene	2.28 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	68.7	21.8-66.7	8.77	20	M
1,2-Dichlorobenzene	2.36 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	70.9	22-60	9.05	20	M
1,2-Dinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,2-Diphenylhydrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,3,5-Trinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,3-Dichlorobenzene	2.12 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	63.8	22-60	7.87	20	M
1,3-Dinitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,4-Dichlorobenzene	2.19 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	65.8	22-60	7.82	20	M
1,4-Dinitrobenzene	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
1,4-Dioxane	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1,4-Naphthoquinone	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1-Chloronaphthalene	2.26 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200	7.35	20	

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
1-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
1-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2,3,4,6-Tetrachlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2,3,5,6-Tetrachlorophenol	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
2,3,7,8-TCDD (SIM)	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2,3-Dichloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet		0-200		20	
2,4,5-Trichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		50-110		20	
2,4,6-Trichlorophenol	2.32 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.7	50-115	8.83	20	
2,4-Dichlorophenol	2.50 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	75.2	50-105	7.66	20	
2,4-Dimethylphenol	2.40 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	72.3	30-110	10.0	20	
2,4-Dinitrophenol	2.22 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	66.8	15-140	16.2	20	
2,4-Dinitrotoluene	2.39 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	71.9	17-111	5.73	20	
2,6-Dichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2,6-Dinitrotoluene	2.43 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	73.0	15-140	6.74	20	
2-Acetylaminofluorene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2-Chloronaphthalene	2.29 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	68.9	45-105	7.36	20	
2-Chlorophenol	2.12 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	64.0	19-64	6.79	20	
2-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		45-105		20	
2-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2-Nitrophenol	2.41 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	72.7	40-115	6.67	20	
2-Picoline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
3,3'-Dichlorobenzidine	2.81 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	84.6	20-110	11.2	20	
3,3'-Dimethylbenzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
3-Methylcholanthrene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
3-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
4,4'-DDE	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
4,6-Dinitro-2-methylphenol	2.32 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.9	40-130	12.1	20	
4-Aminobiphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
4-Bromophenyl phenyl ether	2.52 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	76.0	15-110	6.26	20	
4-Chloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		15-110		20	

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
4-Chlorophenyl phenyl ether	2.31 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.6	15-110	6.69	20	
4-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
4-Nitrophenol	2.47 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	74.4	0-125	8.41	20	
4-Nitroquinoline-1-oxide	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
5-Nitro-o-toluidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
7,12-Dimethylbenz (a) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Acenaphthene	2.32 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.9	24-90	8.11	20	
Acenaphthylene	2.44 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	73.5	50-105	7.09	20	
Acetochlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Acetophenone	1.89 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	57.0	0-200	7.48	20	
Alachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Aldrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
alpha,alpha-Dimethyl phenethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
alpha-Terpineol	2.53 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	76.3	0-200	9.42	20	
Aniline	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Anthracene	2.35 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	70.6	55-110	8.49	20	
Aramite	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Atrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Benzaldehyde	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Benzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet		0-130		20	
Benzo (a) anthracene	2.43 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	73.1	55-110	8.57	20	
Benzo (a) pyrene	2.52 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	75.8	55-110	10.6	20	
Benzo (b) fluoranthene	2.71 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	81.7	45-120	16.0	20	
Benzo (g,h,i) perylene	2.04 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	61.4	40-125	11.9	20	
Benzo (k) fluoranthene	2.38 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	71.5	45-125	1.21	20	
Benzoic acid	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-125		20	
Benzyl alcohol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
bis (2-Chloroethoxy) methane	2.52 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	75.9	40-125	8.80	20	
bis (2-Chloroethyl) ether	2.32 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.9	40-125	7.40	20	
bis (2-chloroisopropyl) ether	2.28 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	68.7	40-125	6.67	20	
bis (2-Ethylhexyl) adipate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
bis (2-Ethylhexyl) phthalate	1.86 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	56.1	40-125	6.51	20	
Butachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Butyl benzyl phthalate	1.75 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	52.6	45-115	3.92	20	
Caprolactam	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Carbazole	3.32 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	99.8	0-200	6.39	20	
Catechol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Chlorobenzilate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Chrysene	2.30 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.2	55-110	8.03	20	
Diallate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Dibenz (a,h) anthracene	2.45 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	73.8	40-125	14.1	20	
Dibenz (a,j) acridine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Dibenzofuran	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Dieldrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Diethyl phthalate	2.22 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	66.9	40-120	7.84	20	
Dimethoate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Dimethyl phthalate	2.16 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	65.1	25-125	6.15	20	
Dimethylphenethylamine	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
Di-n-butyl phthalate	2.79 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	84.1	55-115	7.13	20	
Di-n-octyl phthalate	1.76 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	53.0	35-135	4.31	20	
Dinoseb	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
Diphenyl ether	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
Diphenylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Disulfoton	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Endrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
EPTC	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Ethyl methacrylate	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
Ethyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Ethyl parathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Famphur	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Fluoranthene	2.66 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	80.1	55-115	8.71	20	
Fluorene	2.29 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.0	50-110	6.64	20	

AIR WATER & SOIL LABORATORIES, INC.

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
gamma-BHC (Lindane)	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Heptachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Heptachlor epoxide	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Hexachlorobenzene	2.51 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	75.6	25-125	7.88	20	
Hexachlorobutadiene	2.65 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	79.8	25-125	8.81	20	
Hexachlorocyclopentadiene	1.06 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	31.9	25-125	18.3	20	
Hexachloroethane	2.10 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	63.2	25-125	7.31	20	
Hexachlorophene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Hexachloropropene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Indeno (1,2,3-cd) pyrene	2.34 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	70.5	45-125	13.0	20	
Isodrin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Isophorone	2.36 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	70.9	10-110	8.99	20	
Isosafrole	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Kepone	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Library Search	<0.00 mg/kg wet	0.00	mg/kg wet		<0.00 mg/kg wet		0-200		20	
4-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		40-105		20	
Methapyrilene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Methoxychlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Methyl methacrylate	<0.00250 mg/kg wet	0.00250	mg/kg wet		<0.00250 mg/kg wet		0-200		20	
Methyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Methyl parathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Metolachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Metribuzin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Molinate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Naphthalene	2.30 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	69.2	40-100	10.1	20	
n-Decane	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet		0-200		20	
Nicotine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Nitrobenzene	2.09 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	62.8	40-100	4.32	20	
n-Nitrosodiethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
n-Nitrosodimethylamine	1.97 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	59.2	25-110	14.0	20	
n-Nitrosodi-n-butylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	

AIR WATER & SOIL LABORATORIES, INC.

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
n-Nitrosodi-n-propylamine	2.18 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	65.6	12-97	5.22	20	
n-Nitrosodiphenylamine	1.90 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	57.1	12-97	5.75	20	
n-Nitrosomethylethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		25-110		20	
n-Nitrosomorpholine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
n-Nitrosopiperidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
n-Nitrosopyrrolidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
n-Octadecane	<0.0833 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet		0-200		20	
Nonylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
o,o,o-Triethyl phosphorothioate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
o,o-Diethyl o-2-pyrazinyl phosphorothioate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
o+m+p-Cresols	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
2-Methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		40-110		20	
o-Toluidine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
p-(Dimethylamino) azobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
4-Chloro-3-methylphenol	2.37 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	71.4	10-91	7.47	20	
Pentachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Pentachloroethane	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Pentachloronitrobenzene (quintozene)	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Pentachlorophenol	2.22 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	66.8	27-109	8.19	20	
Phenacetin	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Phenanthrene	2.41 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	72.5	50-115	6.96	20	
Phenol	2.14 mg/kg wet	0.0833	mg/kg wet	3.36	<0.0833 mg/kg wet	63.7	0-115	7.46	20	
Phorate	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
p-Phenylenediamine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Pronamide	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Propachlor	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Pyrene	1.80 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	54.3	23-110	1.05	20	
Pyridine	0.195 mg/kg wet	0.0833	mg/kg wet	3.32	<0.0833 mg/kg wet	5.88	0-200	67.6	20	P
Safrole	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Simazine	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Sulfotepp	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0226 - SW3550C										
Matrix Spike Dup (BAJ0226-MSD1)		**Source: 17J0257-04**		Prepared & Analyzed: 10/09/2017						
Terbacil	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Malathion	<0.0833 mg/kg wet	0.0833	mg/kg wet		<0.0833 mg/kg wet		0-200		20	
Surr: 2,4,6-Tribromophenol (Surr)	2.59		mg/kg wet	3.32	mg/kg wet	78.0	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1.09		mg/kg wet	1.66	mg/kg wet	65.8	45-105			
Surr: 2-Fluorophenol (Surr)	2.30		mg/kg wet	3.32	mg/kg wet	69.2	35-105			
Surr: Nitrobenzene-d5 (Surr)	1.04		mg/kg wet	1.66	mg/kg wet	62.4	35-100			
Surr: Phenol-d5 (Surr)	2.16		mg/kg wet	3.32	mg/kg wet	65.1	40-100			
Surr: p-Terphenyl-d14 (Surr)	0.751		mg/kg wet	1.66	mg/kg wet	45.2	30-125			

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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
Blank (BAJ0458-BLK1)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	<0.00600 mg/kg wet	0.00600	mg/kg wet							
PCB as Aroclor 1016	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet							
4,4'-DDE	<0.00400 mg/kg wet	0.00400	mg/kg wet							
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet							
4,4'-DDT	<0.00400 mg/kg wet	0.00400	mg/kg wet							
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet							
Aldrin	<0.00200 mg/kg wet	0.00200	mg/kg wet							
PCB as Aroclor 1260	<0.100 mg/kg wet	0.100	mg/kg wet							
Dieldrin	<0.00400 mg/kg wet	0.00400	mg/kg wet							
Endosulfan I	<0.00400 mg/kg wet	0.00400	mg/kg wet							
Endosulfan II	<0.00600 mg/kg wet	0.00600	mg/kg wet							
Endrin	<0.00400 mg/kg wet	0.00400	mg/kg wet							
gamma-BHC (Lindane)	<0.00200 mg/kg wet	0.00200	mg/kg wet							
Heptachlor	<0.00200 mg/kg wet	0.00200	mg/kg wet							
Heptachlor epoxide	<0.0400 mg/kg wet	0.0400	mg/kg wet							
Methoxychlor	<0.0400 mg/kg wet	0.0400	mg/kg wet							
Toxaphene	<0.0420 mg/kg wet	0.0420	mg/kg wet							
PCBs, Total	<0.900 mg/kg wet	0.900	mg/kg wet							
Surr: DCB	0.0342		mg/kg wet	0.0326		105	30-105			
Surr: TCMX	0.0244		mg/kg wet	0.0326		75.0	30-105			
Surr: TCMX [2C]	0.0212		mg/kg wet	0.0326		65.0	30-105			
Surr: TCMX	0.0244		mg/kg wet	0.0326		75.0	30-105			
Surr: DCB	0.0342		mg/kg wet	0.0326		105	30-105			
Surr: DCB [2C]	0.0277		mg/kg wet	0.0326		85.0	30-105			

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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
LCS (BAJ0458-BS1)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	0.0183 mg/kg wet	0.00600	mg/kg wet	0.0167	mg/kg wet	110	23-134			
4,4'-DDE	0.0167 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	100	23-134			
4,4'-DDT	0.0200 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	120	23-134			
Aldrin	0.0150 mg/kg wet	0.00200	mg/kg wet	0.0167	mg/kg wet	90.0	23-134			
Dieldrin	0.0167 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Endosulfan I	0.0167 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Endosulfan II	0.0183 mg/kg wet	0.00600	mg/kg wet	0.0167	mg/kg wet	110	23-134			
Endrin	0.0200 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	120	23-134			
gamma-BHC (Lindane)	0.0167 mg/kg wet	0.00200	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Heptachlor	0.0167 mg/kg wet	0.00200	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Heptachlor epoxide	<0.0400 mg/kg wet	0.0400	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Methoxychlor	<0.0400 mg/kg wet	0.0400	mg/kg wet	0.0167	mg/kg wet	120	23-134			
Toxaphene	<0.0420 mg/kg wet	0.0420	mg/kg wet		mg/kg wet		23-134			
Surr: TCMX	0.0333		mg/kg wet	0.0333	mg/kg wet	100	30-105			
Surr: TCMX [2C]	0.0350		mg/kg wet	0.0333	mg/kg wet	105	30-105			
Surr: DCB	0.0350		mg/kg wet	0.0333	mg/kg wet	105	30-105			
Surr: DCB [2C]	0.0350		mg/kg wet	0.0333	mg/kg wet	105	30-105			
LCS (BAJ0458-BS2)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
PCB as Aroclor 1016	0.285 mg/kg wet	0.100	mg/kg wet	0.160	mg/kg wet	178	60-140			L
PCB as Aroclor 1260	0.271 mg/kg wet	0.100	mg/kg wet	0.160	mg/kg wet	169	60-140			L
Surr: DCB	0.0321		mg/kg wet	0.0321	mg/kg wet	100	30-105			
Surr: TCMX	0.0272		mg/kg wet	0.0321	mg/kg wet	85.0	30-105			
LCS (BAJ0458-BS3)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	<0.00600 mg/kg wet	0.00600	mg/kg wet		mg/kg wet		23-134			
4,4'-DDE	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
4,4'-DDT	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
Aldrin	<0.00200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
Dieldrin	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
Endosulfan I	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
Endosulfan II	<0.00600 mg/kg wet	0.00600	mg/kg wet		mg/kg wet		23-134			

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Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
LCS (BAJ0458-BS3)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
Endrin	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
gamma-BHC (Lindane)	<0.00200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
Heptachlor	<0.00200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
Heptachlor epoxide	<0.0400 mg/kg wet	0.0400	mg/kg wet		mg/kg wet		23-134			
Methoxychlor	<0.0400 mg/kg wet	0.0400	mg/kg wet		mg/kg wet		23-134			
Toxaphene	0.340 mg/kg wet	0.0420	mg/kg wet	0.411	mg/kg wet	82.8	23-134			
Surr: TCMX	ND		mg/kg wet	0.0329	mg/kg wet		30-105			
Surr: TCMX [2C]	ND		mg/kg wet	0.0329	mg/kg wet		30-105			
Surr: DCB	ND		mg/kg wet	0.0329	mg/kg wet		30-105			
Surr: DCB [2C]	ND		mg/kg wet	0.0329	mg/kg wet		30-105			
LCS (BAJ0458-BS4)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	<0.00600 mg/kg wet	0.00600	mg/kg wet		mg/kg wet		23-134			
4,4'-DDE	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
4,4'-DDT	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
Aldrin	<0.00200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
Dieldrin	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
Endosulfan I	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
Endosulfan II	<0.00600 mg/kg wet	0.00600	mg/kg wet		mg/kg wet		23-134			
Endrin	<0.00400 mg/kg wet	0.00400	mg/kg wet		mg/kg wet		23-134			
gamma-BHC (Lindane)	<0.00200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
Heptachlor	<0.00200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
Heptachlor epoxide	<0.0400 mg/kg wet	0.0400	mg/kg wet		mg/kg wet		23-134			
Methoxychlor	<0.0400 mg/kg wet	0.0400	mg/kg wet		mg/kg wet		23-134			
Toxaphene	<0.0420 mg/kg wet	0.0420	mg/kg wet		mg/kg wet		23-134			
Surr: TCMX	ND		mg/kg wet	0.0328	mg/kg wet		30-105			
Surr: TCMX [2C]	ND		mg/kg wet	0.0328	mg/kg wet		30-105			
Surr: DCB	ND		mg/kg wet	0.0328	mg/kg wet		30-105			
Surr: DCB [2C]	ND		mg/kg wet	0.0328	mg/kg wet		30-105			

AIR WATER & SOIL LABORATORIES, INC.

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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
Matrix Spike (BAJ0458-MS1)		**Source: 17J0144-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	0.0194 mg/kg dry	0.00636	mg/kg dry	0.0177	<0.00636 mg/kg dry	110	23-134			
4,4'-DDE	0.0177 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	100	23-134			
4,4'-DDT	0.0212 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	120	23-134			
Aldrin	0.0177 mg/kg dry	0.00212	mg/kg dry	0.0177	<0.00212 mg/kg dry	100	23-134			
Dieldrin	0.0177 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	100	23-134			
Endosulfan I	0.0177 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	100	23-134			
Endosulfan II	0.0177 mg/kg dry	0.00636	mg/kg dry	0.0177	<0.00636 mg/kg dry	100	23-134			
Endrin	0.0247 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	140	23-134			M
gamma-BHC (Lindane)	0.0194 mg/kg dry	0.00212	mg/kg dry	0.0177	<0.00212 mg/kg dry	110	23-134			
Heptachlor	0.0194 mg/kg dry	0.00212	mg/kg dry	0.0177	<0.00212 mg/kg dry	110	23-134			
Heptachlor epoxide	<0.0424 mg/kg dry	0.0424	mg/kg dry	0.0177	<0.0424 mg/kg dry	100	23-134			
Methoxychlor	<0.0424 mg/kg dry	0.0424	mg/kg dry	0.0177	<0.0424 mg/kg dry	130	23-134			
Surr: TCMX [2C]	0.0247		mg/kg dry	0.0353	mg/kg dry	70.0	30-105			
Surr: TCMX	0.0353		mg/kg dry	0.0353	mg/kg dry	100	30-105			
Surr: DCB	0.0336		mg/kg dry	0.0353	mg/kg dry	95.0	30-105			
Surr: DCB [2C]	0.0265		mg/kg dry	0.0353	mg/kg dry	75.0	30-105			
Matrix Spike (BAJ0458-MS2)		**Source: 17J0274-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
PCB as Aroclor 1016	0.300 mg/kg dry	0.103	mg/kg dry	0.172	<0.103 mg/kg dry	174	60-140			M
PCB as Aroclor 1260	0.248 mg/kg dry	0.103	mg/kg dry	0.172	<0.103 mg/kg dry	144	60-140			M
Surr: DCB	0.0310		mg/kg dry	0.0345	mg/kg dry	90.0	30-105			
Surr: TCMX	0.0293		mg/kg dry	0.0345	mg/kg dry	85.0	30-105			
Matrix Spike Dup (BAJ0458-MSD1)		**Source: 17J0144-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	0.0208 mg/kg dry	0.00623	mg/kg dry	0.0173	<0.00623 mg/kg dry	120	23-134	6.72	20	
4,4'-DDE	0.0190 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	110	23-134	7.55	20	
4,4'-DDT	0.0190 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	110	23-134	10.7	20	
Aldrin	0.0190 mg/kg dry	0.00208	mg/kg dry	0.0173	<0.00208 mg/kg dry	110	23-134	7.55	20	
Dieldrin	0.0190 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	110	23-134	7.55	20	
Endosulfan I	0.0190 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	110	23-134	7.55	20	
Endosulfan II	0.0190 mg/kg dry	0.00623	mg/kg dry	0.0173	<0.00623 mg/kg dry	110	23-134	7.55	20	
Endrin	0.0242 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	140	23-134	1.98	20	M

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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
Matrix Spike Dup (BAJ0458-MSD1)		**Source: 17J0144-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
gamma-BHC (Lindane)	0.0190 mg/kg dry	0.00208	mg/kg dry	0.0173	<0.00208 mg/kg dry	110	23-134	1.98	20	
Heptachlor	0.0190 mg/kg dry	0.00208	mg/kg dry	0.0173	<0.00208 mg/kg dry	110	23-134	1.98	20	
Heptachlor epoxide	<0.0416 mg/kg dry	0.0416	mg/kg dry	0.0173	<0.0416 mg/kg dry	110	23-134	7.55	20	
Methoxychlor	<0.0416 mg/kg dry	0.0416	mg/kg dry	0.0173	<0.0416 mg/kg dry	120	23-134	9.98	20	
Surr: TCMX	0.0364		mg/kg dry	0.0346	mg/kg dry	105	30-105			
Surr: TCMX [2C]	0.0381		mg/kg dry	0.0346	mg/kg dry	110	30-105			
Surr: DCB	0.0346		mg/kg dry	0.0346	mg/kg dry	100	30-105			
Surr: DCB [2C]	0.0381		mg/kg dry	0.0346	mg/kg dry	110	30-105			
Matrix Spike Dup (BAJ0458-MSD2)		**Source: 17J0274-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
PCB as Aroclor 1016	0.316 mg/kg dry	0.106	mg/kg dry	0.176	<0.106 mg/kg dry	179	60-140	5.13	20	M
PCB as Aroclor 1260	0.282 mg/kg dry	0.106	mg/kg dry	0.176	<0.106 mg/kg dry	160	60-140	12.8	20	M
Surr: DCB	0.0300		mg/kg dry	0.0353	mg/kg dry	85.0	30-105			
Surr: TCMX	0.0282		mg/kg dry	0.0353	mg/kg dry	80.0	30-105			

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Wet Chemistry Analysis - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0235 - No Prep Wet Chem										
Blank (BAJ0235-BLK1)				Prepared & Analyzed: 10/09/2017						
Percent Solids	100 %	0.10	%							
Duplicate (BAJ0235-DUP1)		**Source: 17J0229-02**		Prepared & Analyzed: 10/09/2017						
Percent Solids	94.2 %	0.10	%		94.0 %			0.231	20	
Duplicate (BAJ0235-DUP2)		**Source: 17J0274-04**		Prepared & Analyzed: 10/09/2017						
Percent Solids	94.1 %	0.10	%		94.2 %			0.107	20	
Batch BAJ0593 - No Prep Wet Chem										
Blank (BAJ0593-BLK1)				Prepared & Analyzed: 10/19/2017						
Cyanide	<0.01 mg/kg wet	0.01	mg/kg wet							
LCS (BAJ0593-BS1)				Prepared & Analyzed: 10/19/2017						
Cyanide	0.22 mg/L	0.01	mg/L	0.250 mg/L		87.8	80-120			
LCS Dup (BAJ0593-BSD1)				Prepared & Analyzed: 10/19/2017						
Cyanide	0.23 mg/L	0.01	mg/L	0.250 mg/L		90.4	80-120	2.96	20	
Matrix Spike (BAJ0593-MS1)		**Source: 17J0274-04**		Prepared & Analyzed: 10/19/2017						
Cyanide	19.9 mg/kg dry	0.97	mg/kg dry	24.3	<0.97 mg/kg dry	82.1	75-125			
Matrix Spike Dup (BAJ0593-MSD1)		**Source: 17J0274-04**		Prepared & Analyzed: 10/19/2017						
Cyanide	21.5 mg/kg dry	0.97	mg/kg dry	24.3	<0.97 mg/kg dry	88.6	75-125	7.69	20	

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Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Solids	
Antimony	VELAP
Arsenic	VELAP
Barium	VELAP,WVDEP
Beryllium	VELAP
Cadmium	VELAP,WVDEP
Chromium	VELAP
Cobalt	VELAP
Copper	VELAP
Iron	VELAP
Lead	VELAP,WVDEP
Nickel	VELAP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Thallium	VELAP
Vanadium	VELAP
Zinc	VELAP
SW7471B in Solids	
Mercury	VELAP,WVDEP
SW8081B in Solids	
Dieldrin	NC,VELAP
Endosulfan I	NC,VELAP
Endosulfan II	NC,VELAP
Endrin	NC,VELAP
gamma-BHC (Lindane)	NC,VELAP
Heptachlor	NC,VELAP
Heptachlor epoxide	NC,VELAP
Methoxychlor	NC,VELAP
Toxaphene	NC,VELAP
SW8082A in Solids	
PCB as Aroclor 1016	VELAP,NC
PCB as Aroclor 1221	VELAP,NC
PCB as Aroclor 1232	VELAP,NC
PCB as Aroclor 1242	VELAP,NC
PCB as Aroclor 1248	VELAP,NC
PCB as Aroclor 1254	VELAP,NC
PCB as Aroclor 1260	VELAP,NC

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Certified Analyses included in this Report

Analyte	Certifications
SW8270D in Solids	
1,2,4-Trichlorobenzene	NC,VELAP,WVDEP
1,2-Dichlorobenzene	NC,VELAP,WVDEP
1,3-Dichlorobenzene	NC,VELAP,WVDEP
1,4-Dichlorobenzene	NC,VELAP,WVDEP
2,4,5-Trichlorophenol	NC,VELAP,WVDEP
2,4,6-Trichlorophenol	NC,VELAP,WVDEP
2,4-Dichlorophenol	NC,VELAP,WVDEP
2,4-Dimethylphenol	NC,VELAP,WVDEP
2,4-Dinitrophenol	NC,VELAP,WVDEP
2,4-Dinitrotoluene	NC,VELAP,WVDEP
2,6-Dinitrotoluene	NC,VELAP,WVDEP
2-Chlorophenol	NC,VELAP,WVDEP
2-Methylnaphthalene	NC,VELAP,WVDEP
3-Nitroaniline	NC,VELAP,WVDEP
4-Chloroaniline	NC,VELAP,WVDEP
4-Nitroaniline	NC,VELAP,WVDEP
Acenaphthene	NC,VELAP,WVDEP
Anthracene	NC,VELAP,WVDEP
Benzo (a) anthracene	NC,VELAP,WVDEP
Benzo (a) pyrene	NC,VELAP,WVDEP
Benzo (b) fluoranthene	NC,VELAP,WVDEP
Benzo (k) fluoranthene	NC,VELAP,WVDEP
bis (2-Chloroethoxy) methane	NC,VELAP,WVDEP
bis (2-Chloroethyl) ether	NC,VELAP,WVDEP
2,2'-Oxybis (1-chloropropane)	NC,VELAP,WVDEP
bis (2-Ethylhexyl) phthalate	NC,VELAP,WVDEP
Butyl benzyl phthalate	NC,VELAP,WVDEP
Chrysene	NC,VELAP,WVDEP
Dibenz (a,h) anthracene	NC,VELAP,WVDEP
Diethyl phthalate	NC,VELAP,WVDEP
Dimethyl phthalate	NC,VELAP,WVDEP
Di-n-butyl phthalate	NC,VELAP,WVDEP
Di-n-octyl phthalate	NC,VELAP,WVDEP
Fluoranthene	NC,VELAP,WVDEP
Fluorene	NC,VELAP,WVDEP
Hexachlorobenzene	NC,VELAP,WVDEP

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Certified Analyses included in this Report

Analyte	Certifications
Hexachlorobutadiene	NC,VELAP,WVDEP
Hexachlorocyclopentadiene	NC,VELAP,WVDEP
Hexachloroethane	NC,VELAP,WVDEP
Indeno (1,2,3-cd) pyrene	NC,VELAP,WVDEP
Isophorone	NC,VELAP,WVDEP
m+p-Cresols	NC,VELAP,WVDEP
Naphthalene	NC,VELAP,WVDEP
Nitrobenzene	NC,VELAP,WVDEP
n-Nitrosodi-n-propylamine	NC,VELAP,WVDEP
n-Nitrosodiphenylamine	NC,VELAP,WVDEP
o+m+p-Cresols	NC,VELAP,WVDEP
o-Cresol	NC,VELAP,WVDEP
p-Chloro-m-cresol	NC,VELAP,WVDEP
Pentachlorophenol	NC,VELAP,WVDEP
Phenanthrene	NC,VELAP,WVDEP
Phenol	NC,VELAP,WVDEP
Pyrene	NC,VELAP,WVDEP
SW9012B in Solids	
Cyanide	VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2017
NC	North Carolina DENR	495	12/31/2017
PADEP	NELAC-Pennsylvania	001	10/31/2017
VELAP	NELAC-Virginia Certificate #9439	460021	06/14/2018
WVDEP	West Virginia DEP	350	11/30/2017

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Summary of Data Qualifiers

C	Continuing calibarion verification response for this analyte is outside specifications.
E	Estimated concentration, outside calibration range
L	LCS recovery is outside of established acceptance limits
M	Matrix spike recovery is outside established acceptance limits
P	Duplicate analysis does not meet the acceptance criteria for precision
RPD	Relative Percent Difference
Qual	Qualifers
-RE	Denotes sample was re-analyzed
D.F.	Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
PCBs, Total	Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

CLIENT:	LIESFELD FARMS	CONSULTANT:	DRAPER ADEN ASSOCIATES	COPY COA TO CONSULTANT?	YES
ATTN:	THOMAS LIESFELD	ATTN:	WILLIAM A SALOMONE (WSALOMONE@DAA.COM)	COPY INVOICE TO CONSULTANT?	YES
STREET:	859 BEN HATCHER ROAD	STREET:	8090 VILLA PARK DRIVE	PROJECT:	NKWP / WEANACK LAND RECLAMATION CRITERIA
CITY:	WAYNESBORO, GA 30830	CITY:	RICHMOND, VIRGINIA 23228	LOCATION:	NEW KENT, VIRGINIA
PHONE:	804-833-4286	PHONE:	804-264-2228	LABORATORY:	AIR, WATER, & SOIL LABORATORIES
TURN AROUND:	STANDARD	P.O. #:	R15434R-12	10/5/2017	ANALYSES REQUESTED

LAB USE ONLY	SAMPLE INFORMATION			COMPOSITE	NO. OF JARS	MATRIX	see attached table (exclusion criteria column only)						COMMENTS (SAMPLING INTERVAL)
LAB ID	SAMPLE ID	DATE	TIME		*								
	EA-3-12	10/5	15:00	X	4	S	X						1-12 INCHES
	EA-3-24	10/5	15:15	X	4	S	X						12-24 INCHES
													* PLEASE HOLD TCLP SOILS - PENDING ANALYSIS ON FIRST RUN

SAMPLED BY: [signature]

PRINTED NAME: Bradley Fitzwater

NOTES: Level 2 data package.
Please report all concentrations in mg/kg (dry weight).
All dry weight analyses shall be total analysis.

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME	REASON FOR TRANSPORT
[signature]	10/5/17	16:25	[signature]	10/5/17	16:25	TO LABORATORY OF CHEMICAL ANALYSIS

TEMP: 1.2°C | pH: | CONTENTS: A = AIR; S=SOIL; G=GROUNDWATER; WW=WASTEWATER

BR ~~No Seal~~ Sealed
On Ice

Thomas Liesfeld 17J0229
Weanack Dredge Material Screenin
Recd: 10/05/2017 Due: 10/19/2017

v130325002

PART I

A. MONITORING REQUIREMENTS

During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to manage dredge spoils as specified below:

1. Dredge material may be disposed at the Weanack Land Reclamation Project if testing indicates that parameter concentrations are equal to or less than the Exclusion Criteria in the following table. Dredge material may additionally be characterized as "Clean Fill" if parameter concentrations are equal to or less than the Clean Fill criteria in the following table – also see Part I.B.9.

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
Metals					
All dry weight analyses shall be total analysis. Elutriate analyses shall be total recoverable metal unless otherwise noted.					
7440-36-0	Antimony	410	14	5.6 Dissolved	
7440-38-2	Arsenic	41	20	10 Dissolved	
7440-39-3	Barium, Total Recoverable	19,000	700	1,000	
7440-41-7	Beryllium, Total Recoverable	2,000	160		
7440-43-9	Cadmium, Total Recoverable	810	4.98	0.4	
7440-47-3	Chromium, Total Recoverable	1,200	111	50	
16065-83-1	Chromium III, Dissolved			180 Dissolved	
18540-29-9	Chromium VI, Dissolved			16 Dissolved	
7440-48-4	Cobalt, Total Recoverable	300			
7440-50-8	Copper	4,300	149	3.6 Dissolved	
7439-89-6	Iron, Total Recoverable	150,000	150,000	300	
7439-92-1	Lead	800	128	15 Dissolved	
7439-96-5	Manganese, Total Recoverable			50	
7439-97-6	Mercury, Total Recoverable	100	1.06	0.05	1.0
7440-02-0	Nickel	1,000	48.6	56 Dissolved	

Thomas Liesfeld 17J0229
Weanack Dredge Material Screenin
Recd: 10/05/2017 Due: 10/19/2017
v130325002

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
7782-49-2	Selenium, Total Recoverable	5,100	63	10	
7440-22-4	Silver, Total Recoverable	5,100	110	None	0.20
7440-23-5	Sodium			270,000	
7440-28-0	Thallium	5	1	0.24 Dissolved	1.0
7440-62-2	Vanadium, Total Recoverable	5,200	370		
7440-66-6	Zinc	7,500	459	36 Dissolved	
PCBs					
12674-11-2	Aroclor 1016	21			
11104-28-2	Aroclor 1221	0.62			
11141-16-5	Aroclor 1232	0.62			
53469-21-9	Aroclor 1242	0.74			
12672-29-6	Aroclor 1248	0.74			
11097-69-1	Aroclor 1254	0.74			
11096-82-5	Aroclor 1260	0.74			
1336-36-3	Total PCBs, sum of above 7 Aroclors	25.2	0.49		
1336-36-3	Total PCBs, all congeners		0.676	0.00064	
Pesticides					
309-00-2	Aldrin	0.11	0.04	0.00049	0.05
57-74-9	Chlordane		0.0176	0.008	0.2
2921-88-2	Chloropyrifos			0.083	0.2
72-54-8	DDD	7.2	0.028	0.0031	0.1
72-55-9	DDE	5.1	0.0313	0.0022	0.1
50-29-3	DDT	7	0.0629	0.001	0.1
333-41-5	Diazinon			0.17	
60-57-1	Dieldrin	0.11	0.042	0.00052	0.1
115-29-7	Endosulfan	3,700			
~~959-98-8~~	~~Alpha-Endosulfan~~			~~0.22~~	
33213-65-9	Beta-Endosulfan			0.22	

Thomas Liesfeld 17J0229
Weanack Dredge Material Screenin
Recd: 10/05/2017 Due: 10/19/2017
v130325002

SOURCE MONITORING					
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			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
1031-07-8	Endosulfan Sulfate			62	
72-20-8	Endrin	180	0.207	0.004	0.1
7421-93-4	Endrin Aldehyde			0.29	
76-44-8	Heptachlor	0.38	0.15	0.00079	0.05
1024-57-3	Heptachlor Epoxide	0.19	0.016	0.00039	0.05
319-84-6	Hexachlorocyclohexane Alpha-BHC			0.026	0.05
319-85-7	Hexachlorocyclohexane Beta-BHC			0.091	
58-89-9	Hexachlorocyclohexane Gamma-BHC (Lindane)	0.52	0.00499	0.01	0.05
143-50-0	Kepone			None	5
72-43-5	Methoxychlor	3,100	280	0.03	0.05
2385-85-5	Mirex			None	0.05
56-38-2	Parathion			0.065	1
8001-35-2	Toxaphene	1.6	0.1	None	5.0
Base Neutral Extractables					
83-32-9	Acenaphthene	33,000	3,400	670	
120-12-7	Anthracene	170,000	0.845	8,300	
92-87-5	Benzidine			0.00086	5
56-55-3	Benzo(a)anthracene	2.1	0.9	0.038	10.0
205-99-2	Benzo(b)fluoranthene	2.1	0.9	0.038	10.0
207-08-9	Benzo(k)fluoranthene	21	0.9	0.038	10.0
50-32-8	Benzo(a)pyrene	0.66	0.21	0.038	10.0
111-91-1	Bis-2-Chloroethoxy Methane	1,800			
111-44-4	Bis-2-Chloroethyl Ether	0.9	0.66	0.30	5
108-60-1	Bis-2-Chloroisopropyl Ether (2,2'-oxybis(1-Chloropropane))	2,300	2,300	1,400	
117-81-7	Bis-2-Ethylhexyl Phthalate	120	49	12	
85-68-7	Butyl Benzyl Phthalate	1,100	910	1,500	
106-47-8	4-Chloroaniline	230	230		

Thomas Liesfeld 17J0229
Weanack Dredge Material Screenin
Recd: 10/05/2017 Due: 10/19/2017
v130325002

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
91-58-7	2-Chloronaphthalene			1,000	
218-01-9	Chrysene	210	1.29	0.0038	10.0
53-70-3	Dibenz(a,h)anthracene	0.66	0.21	0.038	20.0
84-74-2	Dibutyl Phthalate (Di-n-Butyl Phthalate)	5,700	5,700	2,000	
95-50-1	1,2-Dichlorobenzene	10,000	5,100	420	
541-73-1	1,3-Dichlorobenzene	5,100	5,100	320	
106-46-7	1,4-Dichlorobenzene	570	13	63	
91-94-1	3,3-Dichlorobenzidine	3.8	2	0.21	5
84-66-2	Diethyl Phthalate	490,000	10,000	17,000	
131-11-3	Dimethyl Phthalate	10,000	10,000	270,000	
117-84-0	Di-n-Octyl Phthalate	1,100	1,100		
121-14-2	2,4-Dinitrotoluene	1,200		1.1	10.0
606-20-2	2,6-Dinitrotoluene	620	61		
122-66-7	1,2-Diphenylhydrazine			0.36	5
206-44-0	Fluoranthene	22,000	2.23	130	
86-73-7	Fluorene	22,000	0.536	1,100	
118-74-1	Hexachlorobenzene	1.1	0.66	0.0028	5
87-68-3	Hexachlorobutadiene	22	1	4.4	5
77-47-4	Hexachlorocyclopentadiene	3,700	400	40	
67-72-1	Hexachloroethane	120	6	14	
193-39-5	Indeno(1,2,3-cd)pyrene	2.1	0.9	0.038	20.0
78-59-1	Isophorone	1,800	1,100	350	
91-57-6	2-Methylnaphthalene	4,100			
91-20-3	Naphthalene	230	0.561		
99-09-2	3-Nitroaniline	82			
100-01-6	4-Nitroaniline	82			
98-95-3	Nitrobenzene	280	28	17	
62-75-9	N-Nitrosodimethylamine			0.0069	5

Thomas Liesfeld 17J0229
Weanack Dredge Material Screenin
Recd: 10/05/2017 Due: 10/19/2017

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SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
621-64-7	N-Nitrosodi-n-propylamine	0.66	0.25	0.05	5
86-30-6	N-Nitrosodiphenylamine	350	140	33	
85-01-8	Phenanthrene		1.17		
120-00-0	Pyrene	17,000	1.52	830	
120-82-1	1,2,4-Trichlorobenzene	400	68	35	
Volatiles					
107-02-8	Acrolein			6.1	50
107-13-1	Acrylonitrile			0.51	50
71-43-2	Benzene			22	
75-25-2	Bromoform			43	
56-23-5	Carbon Tetrachloride			2.3	10.0
108-90-7	Chlorobenzene (Monochlorobenzene)			130	
124-48-1	Chlorodibromomethane			4.0	10.0
67-66-3	Chloroform			340	
75-09-2	Dichloromethane (Methylene Chloride)			46	
75-27-4	Dichlorobromomethane			5.5	10.0
107-06-2	1,2-Dichloroethane			3.8	10.0
75-35-4	1,1-Dichloroethylene			330	
156-60-5	1,2-trans-Dichloroethylene			140	
78-87-5	1,2-Dichloropropane			5.0	5
542-75-6	1,3-Dichloropropene			3.4	5
100-41-4	Ethylbenzene			530	
74-83-9	Methyl Bromide (Bromomethane)			47	
79-34-5	1,1,2,2-Tetrachloroethane			1.7	5
127-18-4	Tetrachloroethylene			6.9	10.0
10-88-3	Toluene			510	
~~79-00-5~~	~~1,1,2-Trichloroethane~~			~~5.9~~	
79-01-6	Trichloroethylene			25	

Thomas Liesfeld **17J0229**
Weanack Dredge Material Screenin
Recd: 10/05/2017 Due: 10/19/2017
v130325002

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
75-01-4	Vinyl Chloride			0.25	10.0
Acid Extractables					
59-50-7	4-Chloro-3-Methylphenol	10,000	10,000		
95-57-8	2-Chlorophenol	5,100	280	81	
120-83-2	2,4-Dichlorophenol	1,800	170	77	
105-67-9	2,4-Dimethylphenol	12,000	1,100	380	
51-28-5	2,4-Dinitrophenol	1,200	110	69	
534-52-1	2-Methyl-4,6-Dinitrophenol			13	
95-48-7	2-Methylphenol	2,800	2,800		
106-44-5	4-Methylphenol	2,800	2,800		
25154-52-3	Nonylphenol			28	
87-86-5	Pentachlorophenol	9	6	2.7	50.0
108-95-2	Phenol	180,000	10,000	10,000	
95-95-4	2,4,5-Trichlorophenol	62,000	5,600		
88-06-2	2,4,6-Trichlorophenol	160	62	14	
Miscellaneous					
776-41-7	Ammonia as NH_3-N			25	200
16887-00-6	Chloride			50,000	
57-12-5	Cyanide, Free			22	
57-12-5	Cyanide, Total	20,000	1,100	5	
94-75-7	2,4-Dichlorophenoxy Acetic Acid (2,4-D)			100	
1746-01-6	Dioxin (2,3,7,8-Tetrachlorodibenzo-p-dioxin)	18 ng/kg	4.3 ng/kg	0.00000005	0.00001
16984-48-8	Fluoride			1,400	
14797-55-8	Nitrate (as N)			5,000	
14797-65-0	Nitrite (as N)			25	
NA	Total Organic Carbon		≤5%	10,000	
NA	Total Petroleum Hydrocarbons			1,000	

Thomas Liesfeld 17J0229
Weanack Dredge Material Screenin
Recd: 10/05/2017 Due: 10/19/2017
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SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
NA	Total Phenols (phenolic compounds)			1	4
130498-29-2	PAHs Total		22.8		
14808-79-8	Sulfate			50,0000	
60-10-5	Tributylin			0.46	
93-72-1	2-(2,4,5-Trichlorophenoxy) Propionic Acid (Silvex)			10	

* Unless units are otherwise noted
** Maximum Quantification Level where needed to demonstrate compliance. The screening criterion is achieved if the pollutant is not detected at the indicated quantification level.

2. Dredged material to be disposed at the Weanack Land Reclamation Project shall be characterized by composite sampling. The sampling and compositing protocols and the sample results shall be submitted to the Virginia Department of Environmental Quality for review and approval prior to disposal. The source of the dredged material and the volume of material to be disposed at Weanack shall also be submitted.

   Elutriate testing shall utilize the standard elutriate test protocol as described in the U. S. Army Corps of Engineers publication titled "Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual – Inland Testing Manual", February 1998 (EPA-823-B-98-004) except that deionized water shall be used for sample preparation. Alternative testing methods may be used after approval by the staff of the Virginia Department of Environmental Quality.

Thomas Liesfeld 17J0229
Weanack Dredge Material Screenin
Recd: 10/05/2017 Due: 10/19/2017
v130325002

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:23
Submitted To:	Thomas Liesfeld	Project Number:	[none]
Client Site I.D.:	NKWP Weanack Land Reclamation Criteria	Purchase Order:	R15434R-12

Sample Conditions Checklist

Samples Received at:	**1.20°C**
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	Yes
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments

PART I

A. MONITORING REQUIREMENTS

During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to manage dredge spoils as specified below:

1. Dredge material may be disposed at the Weanack Land Reclamation Project if testing indicates that parameter concentrations are equal to or less than the Exclusion Criteria in the following table. Dredge material may additionally be characterized as "Clean Fill" if parameter concentrations are equal to or less than the Clean Fill criteria in the following table – also see Part I.B.9.

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
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All dry weight analyses shall be total analysis. Elutriate analyses shall be total recoverable metal unless otherwise noted.					
7440-36-0	Antimony	410	14	5.6 Dissolved	
7440-38-2	Arsenic	41	20	10 Dissolved	
7440-39-3	Barium, Total Recoverable	19,000	700	1,000	
7440-41-7	Beryllium, Total Recoverable	2,000	160		
7440-43-9	Cadmium, Total Recoverable	810	4.98	0.4	
7440-47-3	Chromium, Total Recoverable	1,200	111	50	
16065-83-1	Chromium III, Dissolved			180 Dissolved	
18540-29-9	Chromium VI, Dissolved			16 Dissolved	
7440-48-4	Cobalt, Total Recoverable	300			
7440-50-8	Copper	4,300	149	3.6 Dissolved	
7439-89-6	Iron, Total Recoverable	150,000	150,000	300	
7439-92-1	Lead	800	128	15 Dissolved	
7439-96-5	Manganese, Total Recoverable			50	
7439-97-6	Mercury, Total Recoverable	100	1.06	0.05	1.0
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11141-16-5	Aroclor 1232	0.62			
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12672-29-6	Aroclor 1248	0.74			
11097-69-1	Aroclor 1254	0.74			
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50-29-3	DDT	7	0.0629	0.001	0.1
333-41-5	Diazinon			0.17	
60-57-1	Dieldrin	0.11	0.042	0.00052	0.1
115-29-7	Endosulfan	3,700			
959-98-8	Alpha-Endosulfan			0.22	
33213-65-9	Beta-Endosulfan			0.22	

SOURCE MONITORING					
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1024-57-3	Heptachlor Epoxide	0.19	0.016	0.00039	0.05
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319-85-7	Hexachlorocyclohexane Beta-BHC			0.091	
58-89-9	Hexachlorocyclohexane Gamma-BHC (Lindane)	0.52	0.00499	0.01	0.05
143-50-0	Kepone			None	5
72-43-5	Methoxychlor	3,100	280	0.03	0.05
2385-85-5	Mirex			None	0.05
56-38-2	Parathion			0.065	1
8001-35-2	Toxaphene	1.6	0.1	None	5.0
Base Neutral Extractables					
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92-87-5	Benzidine			0.00086	5
56-55-3	Benzo(a)anthracene	2.1	0.9	0.038	10.0
205-99-2	Benzo(b)fluoranthene	2.1	0.9	0.038	10.0
207-08-9	Benzo(k)fluoranthene	21	0.9	0.038	10.0
50-32-8	Benzo(a)pyrene	0.66	0.21	0.038	10.0
111-91-1	Bis-2-Chloroethoxy Methane	1,800			
111-44-4	Bis-2-Chloroethyl Ether	0.9	0.66	0.30	5
108-60-1	Bis-2-Chloroisopropyl Ether (2,2'-oxybis(1-Chloropropane))	2,300	2,300	1,400	
117-81-7	Bis-2-Ethylhexyl Phthalate	120	49	12	
85-68-7	Butyl Benzyl Phthalate	1,100	910	1,500	
106-47-8	4-Chloroaniline	230	230		

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
91-58-7	2-Chloronaphthalene			1,000	
218-01-9	Chrysene	210	1.29	0.0038	10.0
53-70-3	Dibenz(a,h)anthracene	0.66	0.21	0.038	20.0
84-74-2	Dibutyl Phthalate (Di-n-Butyl Phthalate)	5,700	5,700	2,000	
95-50-1	1,2-Dichlorobenzene	10,000	5,100	420	
541-73-1	1,3-Dichlorobenzene	5,100	5,100	320	
106-46-7	1,4-Dichlorobenzene	570	13	63	
91-94-1	3,3-Dichlorobenzidine	3.8	2	0.21	5
84-66-2	Diethyl Phthalate	490,000	10,000	17,000	
131-11-3	Dimethyl Phthalate	10,000	10,000	270,000	
117-84-0	Di-n-Octyl Phthalate	1,100	1,100		
121-14-2	2,4-Dinitrotoluene	1,200		1.1	10.0
606-20-2	2,6-Dinitrotoluene	620	61		
122-66-7	1,2-Diphenylhydrazine			0.36	5
206-44-0	Fluoranthene	22,000	2.23	130	
86-73-7	Fluorene	22,000	0.536	1,100	
118-74-1	Hexachlorobenzene	1.1	0.66	0.0028	5
87-68-3	Hexachlorobutadiene	22	1	4.4	5
77-47-4	Hexachlorocyclopentadiene	3,700	400	40	
67-72-1	Hexachloroethane	120	6	14	
193-39-5	Indeno(1,2,3-cd)pyrene	2.1	0.9	0.038	20.0
78-59-1	Isophorone	1,800	1,100	350	
91-57-6	2-Methylnaphthalene	4,100			
91-20-3	Naphthalene	230	0.561		
99-09-2	3-Nitroaniline	82			
100-01-6	4-Nitroaniline	82			
98-95-3	Nitrobenzene	280	28	17	
62-75-9	N-Nitrosodimethylamine			0.0069	5

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
621-64-7	N-Nitrosodi-n-propylamine	0.66	0.25	0.05	5
86-30-6	N-Nitrosodiphenylamine	350	140	33	
85-01-8	Phenanthrene		1.17		
120-00-0	Pyrene	17,000	1.52	830	
120-82-1	1,2,4-Trichlorobenzene	400	68	35	
Volatiles					
107-02-8	Acrolein			6.1	50
107-13-1	Acrylonitrile			0.51	50
71-43-2	Benzene			22	
75-25-2	Bromoform			43	
56-23-5	Carbon Tetrachloride			2.3	10.0
108-90-7	Chlorobenzene (Monochlorobenzene)			130	
124-48-1	Chlorodibromomethane			4.0	10.0
67-66-3	Chloroform			340	
75-09-2	Dichloromethane (Methylene Chloride)			46	
75-27-4	Dichlorobromomethane			5.5	10.0
107-06-2	1,2-Dichloroethane			3.8	10.0
75-35-4	1,1-Dichloroethylene			330	
156-60-5	1,2-trans-Dichloroethylene			140	
78-87-5	1,2-Dichloropropane			5.0	5
542-75-6	1,3-Dichloropropene			3.4	5
100-41-4	Ethylbenzene			530	
74-83-9	Methyl Bromide (Bromomethane)			47	
79-34-5	1,1,2,2-Tetrachloroethane			1.7	5
127-18-4	Tetrachloroethylene			6.9	10.0
10-88-3	Toluene			510	
79-00-5	1,1,2-Trichloroethane			5.9	
79-01-6	Trichloroethylene			25	

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
75-01-4	Vinyl Chloride			0.25	10.0
Acid Extractables					
59-50-7	4-Chloro-3-Methylphenol	10,000	10,000		
95-57-8	2-Chlorophenol	5,100	280	81	
120-83-2	2,4-Dichlorophenol	1,800	170	77	
105-67-9	2,4-Dimethylphenol	12,000	1,100	380	
51-28-5	2,4-Dinitrophenol	1,200	110	69	
534-52-1	2-Methyl-4,6-Dinitrophenol			13	
95-48-7	2-Methylphenol	2,800	2,800		
106-44-5	4-Methylphenol	2,800	2,800		
25154-52-3	Nonylphenol			28	
87-86-5	Pentachlorophenol	9	6	2.7	50.0
108-95-2	Phenol	180,000	10,000	10,000	
95-95-4	2,4,5-Trichlorophenol	62,000	5,600		
88-06-2	2,4,6-Trichlorophenol	160	62	14	
Miscellaneous					
776-41-7	Ammonia as NH_3-N			25	200
16887-00-6	Chloride			50,000	
57-12-5	Cyanide, Free			22	
57-12-5	Cyanide, Total	20,000	1,100	5	
94-75-7	2,4-Dichlorophenoxy Acetic Acid (2,4-D)			100	
1746-01-6	Dioxin (2,3,7,8-Tetrachlorodibenzo-p-dioxin)	18 ng/kg	4.3 ng/kg	0.00000005	0.00001
16984-48-8	Fluoride			1,400	
14797-55-8	Nitrate (as N)			5,000	
14797-65-0	Nitrite (as N)			25	
NA	Total Organic Carbon		≤5%	10,000	
NA	Total Petroleum Hydrocarbons			1,000	

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
NA	Total Phenols (phenolic compounds)			1	4
130498-29-2	PAHs Total		22.8		
14808-79-8	Sulfate			50,0000	
60-10-5	Tributylin			0.46	
93-72-1	2-(2,4,5-Trichlorophenoxy) Propionic Acid (Silvex)			10	

* Unless units are otherwise noted

** Maximum Quantification Level where needed to demonstrate compliance. The screening criterion is achieved if the pollutant is not detected at the indicated quantification level.

2. Dredged material to be disposed at the Weanack Land Reclamation Project shall be characterized by composite sampling. The sampling and compositing protocols and the sample results shall be submitted to the Virginia Department of Environmental Quality for review and approval prior to disposal. The source of the dredged material and the volume of material to be disposed at Weanack shall also be submitted.

   Elutriate testing shall utilize the standard elutriate test protocol as described in the U. S. Army Corps of Engineers publication titled "Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual – Inland Testing Manual", February 1998 (EPA-823-B-98-004) except that deionized water shall be used for sample preparation. Alternative testing methods may be used after approval by the staff of the Virginia Department of Environmental Quality.

CFA | Cape Fear Analytical LLC
an affiliate of The GEL Group INC

3306 Kitty Hawk Road, Suite 120 Wilmington, NC 28405
P 910.795.0421
www.capefearanalytical.com

October 31, 2017

Ms. Jennifer Sult
Air Water & Soil
1941 Reymet Road
Richmond, Virginia 23237

Re: Dioxin & HRMS PCB's subcontract
Work Order: 11472
SDG: 17J0229

Dear Ms. Sult:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 10, 2017. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at 910-795-0421.

Sincerely,

Cynde Larkins

Cynde Larkins
Project Manager

Purchase Order: 814
Enclosures

AIR WATER & SOIL LABORATORIES, INC.

Cape Fear Analytical

1941 REYMET ROAD
RICHMOND, VIRGINIA 23237
(804) 358-8295 PHONE
(804)358-8297 FAX

Chain of Custody
Form #: F1331
Rev. 2.0
Effective: Jun 28, 2016

CHAIN OF CUSTODY

CFA WO#11472

COMPANY NAME: Air, Water, & Soil Laboratories	INVOICE TO: Same	PROJECT NAME/Quote #: 17J0229
CONTACT: Katrina Cooke	INVOICE CONTACT: Jennifer Sult	SITE NAME:
ADDRESS: 1941 Reymet Road Richmond, VA 23237	INVOICE ADDRESS:	PROJECT NUMBER:
PHONE #: 804-358-8295	INVOICE PHONE #:	P.O. #: 814
FAX #: EMAIL: Support@awslabs.com		Pretreatment Program:
Is sample for compliance reporting? YES NO	Is sample from a chlorinated supply? YES NO	PWS I.D. #:
SAMPLER NAME (PRINT):	SAMPLER SIGNATURE:	**Due Date:**

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other_____

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE) 2,3,7,8,TCDD Only EPA 1613							
1) 17J0229-01 EA-3-12		X				10/5/2017	15:00		S		X							
2) 17J0229-02 EA-3-24		X				10/5/2017	15:15		S		X							
3)																		
4)																		
5)																		
6)																		
7)																		
8)																		
9)																		
10)																		

COMMENTS

Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol

PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)

Due 10/31/2017

RELINQUISHED: [signature]	DATE / TIME 10/09/17 1700	RECEIVED: UPS	DATE / TIME
RELINQUISHED: UPS	DATE / TIME	RECEIVED: Cynde Jenkins	DATE / TIME 10OCT17/1207
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package
Level III ☐
Level IV ☐

LAB USE ONLY COOLER TEMP 4.2 °C

SAMPLE RECEIPT CHECKLIST

Cape Fear Analytical

Client:	AWSL	Work Order:	11472
Shipping Company:	UPS	Date/Time Received:	10 OCT 17 1207

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?			✓
Samples identified as Foreign Soil?			✓

DOE Site Sample Packages	Yes	NA	No*
Screened <0.5 mR/hr?		✓	
Samples < 2x background?		✓	

* Notify RSO of any responses in this column immediately.

Air Sample Receipt Specifics	Yes	NA	No
Air sample in shipment?			✓

Air Witness: _____

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other(describe)
2	Chain of Custody documents included with shipment?	✓			
3	Samples requiring cold preservation within 0-6°C?	✓			Preservation Method: (ice bags) blue ice dry ice none other (describe) 4.0° + 0.2 = 4.2°C
4	Aqueous samples found to have visible solids?		✓		Sample IDs, containers affected:
5	Samples requiring chemical preservation at proper pH?		✓		Sample IDs, containers affected and pH observed: If preservative added, Lot#:
6	Samples requiring preservation have no residual chlorine?		✓		Sample IDs, containers affected: If preservative added, Lot#:
7	Samples received within holding time?	✓			Sample IDs, tests affected:
8	Sample IDs on COC match IDs on containers?	✓			Sample IDs, containers affected:
9	Date & time of COC match date & time on containers?	✓			Sample IDs, containers affected:
10	Number of containers received match number indicated on COC?	✓			List type and number of containers / Sample IDs, containers affected: 1-8 oz clear soil jar ~~pse~~ per sample. CJ 10OCT17
11	COC form is properly signed in relinquished/received sections?	✓			

Comments:

Checklist performed by: Initials: CJ Date: 10OCT17

CF-UD-F-7

High Resolution Dioxins and Furans Analysis

Case Narrative

HDOX Case Narrative
Air Water & Soil (AWSL)
SDG 17J0229
Work Order 11472

Method/Analysis Information

Product:	**TCDD Only by EPA Method 1613B in Solids**
Analytical Method:	EPA Method 1613B
Extraction Method:	SW846 3540C
Analytical Batch Number:	35993
Clean Up Batch Number:	35992
Extraction Batch Number:	35991

Sample Analysis

The following samples were analyzed using the analytical protocol as established in Method 1613B:

Sample ID	Client ID
11472001	17J0229-01 EA-3-12
11472002	17J0229-02 EA-3-24
12019847	Method Blank (MB)
12019848	Laboratory Control Sample (LCS)
12019849	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-002 REV# 14.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement
The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery
The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement
The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation
A matrix spike and matrix spike duplicate analysis was not required for this SDG.

Technical Information

Holding Time Specifications
CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Nonconformance (NCR) Documentation
A NCR was not required for this SDG.

Manual Integrations
Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction. Manual integrations were required for data files in this SDG.

Sample preparation
No difficulties were encountered during sample preparation.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Certificate of Analysis Report
for

AWSL001 Air Water & Soil

Client SDG: 17J0229 CFA Work Order: 11472

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

K Estimated Maximum Possible Concentration

U Analyte was analyzed for, but not detected above the specified detection limit.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature: Heather Patterson **Name: Heather Patterson**

Date: 31 OCT 2017 **Title: Group Leader**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0229**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**11472001**	**Date Collected:**	**10/05/2017 15:00**	**Matrix:**	**SOIL**
Client Sample:	**1613 TCDD Soil**	**Date Received:**	**10/10/2017 12:07**	**%Moisture:**	**5.4**
Client ID:	**17J0229-01 EA-3-12**			**Prep Basis:**	**Dry Weight**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 12:18**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-8**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10.68 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD	U	0.99	pg/g	0.990

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		155	198	pg/g	78.1	(37%-137%)
37Cl-2,3,7,8-TCDD		16.8	19.8	pg/g	84.6	(42%-164%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0229**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**11472002**	**Date Collected:**	**10/05/2017 15:15**	**Matrix:**	**SOIL**
Client Sample:	**1613 TCDD Soil**	**Date Received:**	**10/10/2017 12:07**	**%Moisture:**	**6**
Client ID:	**17J0229-02 EA-3-24**			**Prep Basis:**	**Dry Weight**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 13:04**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-9**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10.7 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD	U	0.994	pg/g	0.994

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		155	199	pg/g	78.0	(37%-137%)
37Cl-2,3,7,8-TCDD		16.9	19.9	pg/g	84.8	(42%-164%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Quality Control Summary

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 17J0229

Matrix Type: SOLID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12019848	LCS for batch 35991	13C-2,3,7,8-TCDD		80.3	(20%-175%)
		37Cl-2,3,7,8-TCDD		89.8	(31%-191%)
12019849	LCSD for batch 35991	13C-2,3,7,8-TCDD		73.5	(20%-175%)
		37Cl-2,3,7,8-TCDD		84.0	(31%-191%)
12019847	MB for batch 35991	13C-2,3,7,8-TCDD		74.8	(25%-164%)
		37Cl-2,3,7,8-TCDD		82.5	(35%-197%)
11472001	17J0229-01 EA-3-12	13C-2,3,7,8-TCDD		78.1	(37%-137%)
		37Cl-2,3,7,8-TCDD		84.6	(42%-164%)
11472002	17J0229-02 EA-3-24	13C-2,3,7,8-TCDD		78.0	(37%-137%)
		37Cl-2,3,7,8-TCDD		84.8	(42%-164%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number: 17J0229
Client ID: LCS for batch 35991
Lab Sample ID: 12019848
Instrument: HRP750
Analyst: MJC

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 10/27/2017 06:50
Dilution: 1
Prep Batch ID: 35991
Batch ID: 35993

CAS No.		Parmname	Amount Added pg/g	Spike Conc. pg/g	Recovery %	Acceptance Limits
1746-01-6	LCS	2,3,7,8-TCDD	20.0	21.9	110	67-158

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number: 17J0229
Client ID: LCSD for batch 35991
Lab Sample ID: 12019849
Instrument: HRP750
Analyst: MJC

Sample Type: Laboratory Control Sample Duplicate
Matrix: SOIL
Analysis Date: 10/27/2017 07:36
Dilution: 1
Prep Batch ID: 35991
Batch ID: 35993

CAS No.		Parmname	Amount Added pg/g	Spike Conc. pg/g	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	LCSD	2,3,7,8-TCDD	20.0	20.0	99.8	67-158	9.37	0-20

Method Blank Summary

SDG Number:	**17J0229**	**Client:**	**AWSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 35991**	**Instrument ID:**	**HRP750**	**Data File:**	**A26OCT17E_3-3**
Lab Sample ID:	**12019847**	**Prep Date:**	**23-OCT-17**	**Analyzed:**	**10/27/17 08:23**
Column:					

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 35991	12019848	A26OCT17E_3-1	10/27/17	0650
02	LCSD for batch 35991	12019849	A26OCT17E_3-2	10/27/17	0736
03	17J0229-01 EA-3-12	11472001	A26OCT17E_3-8	10/27/17	1218
04	17J0229-02 EA-3-24	11472002	A26OCT17E_3-9	10/27/17	1304

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0229**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**12019847**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 35991**				
Client ID:	**MB for batch 35991**			**Prep Basis:**	**As Received**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 08:23**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-3**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD	U	1	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		150	200	pg/g	74.8	(25%-164%)
37Cl-2,3,7,8-TCDD		16.5	20.0	pg/g	82.5	(35%-197%)

Comments:

K **Estimated Maximum Possible Concentration**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0229**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**12019848**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 35991**				
Client ID:	**LCS for batch 35991**			**Prep Basis:**	**As Received**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 06:50**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-1**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD		21.9	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		161	200	pg/g	80.3	(20%-175%)
37Cl-2,3,7,8-TCDD		18.0	20.0	pg/g	89.8	(31%-191%)

Comments:

U **Analyte was analyzed for, but not detected above the specified detection limit.**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0229**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**12019849**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 35991**				
Client ID:	**LCSD for batch 35991**			**Prep Basis:**	**As Received**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 07:36**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-2**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD		20.0	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		147	200	pg/g	73.5	(20%-175%)
37Cl-2,3,7,8-TCDD		16.8	20.0	pg/g	84.0	(31%-191%)

Comments:

U **Analyte was analyzed for, but not detected above the specified detection limit.**

Final Lab Results (Air Water & Soil)

Weanack Land Criteria

Composite Sample ID's

EA-2 -12

EA-2-24

EA-4 -12

EA-4-24

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Certificate of Analysis

Final Report

Laboratory Order ID 17J0274

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro, GA 30830	Date Received:	October 6, 2017 17:20
		Date Issued:	November 3, 2017 9:21
		Project Number:	R15434R-12
Submitted To:	Thomas Liesfeld	Purchase Order:	
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria		

Enclosed are the results of analyses for samples received by the laboratory on 10/06/2017 17:20. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

Mandy Mishra
Lab Director/Quality Assurance Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 17J0274

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EA-2-12	17J0274-01	Soil	10/06/2017 11:45	10/06/2017 17:20
EA-2-24	17J0274-02	Soil	10/06/2017 11:45	10/06/2017 17:20
EA-4-12	17J0274-03	Soil	10/06/2017 16:00	10/06/2017 17:20
EA-4-24	17J0274-04	Soil	10/06/2017 16:00	10/06/2017 17:20

Results have been calculated based on dry weight.

4-Methylphenol is equal to and reported as 3/4-Methylphenol.
Analysis for 2,3,7,8 TCDD was subcontracted to Cape Fear Analytical. The subcontracted results are attached at the end of this Certificate of Analysis.

This Certificate of Analysis is being reissued on November 3, 2017 to report Pesicide and SVOC in mg/kg.

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-12 **Laboratory Sample ID:** 17J0274-01

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010C	<0.518 mg/kg dry		0.518	1	10/12/17 10:30	10/13/17 12:43	BG
Arsenic	01	SW6010C	**83.4 mg/kg dry**		1.04	1	10/12/17 10:30	10/13/17 12:43	BG
Barium	01	SW6010C	**26.9 mg/kg dry**		0.518	1	10/12/17 10:30	10/13/17 12:43	BG
Beryllium	01	SW6010C	<0.207 mg/kg dry		0.207	1	10/12/17 10:30	10/13/17 12:43	BG
Cadmium	01	SW6010C	**0.454 mg/kg dry**		0.207	1	10/12/17 10:30	10/13/17 12:43	BG
Cobalt	01	SW6010C	**1.85 mg/kg dry**		0.207	1	10/12/17 10:30	10/13/17 12:43	BG
Chromium	01	SW6010C	**135 mg/kg dry**		0.518	1	10/12/17 10:30	10/13/17 12:43	BG
Copper	01	SW6010C	**64.2 mg/kg dry**		2.59	1	10/12/17 10:30	10/13/17 12:43	BG
Iron	01RE1	SW6010C	**4960 mg/kg dry**		25.9	10	10/12/17 10:30	10/13/17 13:32	BG
Mercury	01	SW7471B	**0.020 mg/kg dry**		0.008	1	10/12/17 09:50	10/13/17 08:28	RCV
Nickel	01	SW6010C	**4.33 mg/kg dry**		0.518	1	10/12/17 10:30	10/13/17 12:43	BG
Lead	01	SW6010C	**11.7 mg/kg dry**		0.518	1	10/12/17 10:30	10/13/17 12:43	BG
Antimony	01	SW6010C	<5.18 mg/kg dry		5.18	1	10/12/17 10:30	10/13/17 12:43	BG
Selenium	01	SW6010C	<2.59 mg/kg dry		2.59	1	10/12/17 10:30	10/13/17 12:43	BG
Thallium	01	SW6010C	<2.59 mg/kg dry		2.59	1	10/12/17 10:30	10/13/17 12:43	BG
Vanadium	01	SW6010C	**8.16 mg/kg dry**		0.518	1	10/12/17 10:30	10/13/17 12:43	BG
Zinc	01	SW6010C	**28.7 mg/kg dry**		0.518	1	10/12/17 10:30	10/13/17 12:43	BG
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
1,2,4-Trichlorobenzene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
1,2-Dichlorobenzene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
1,2-Diphenylhydrazine	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
1,3-Dichlorobenzene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
1,4-Dichlorobenzene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
1-Chloronaphthalene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
1-Naphthylamine	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-12 **Laboratory Sample ID:** 17J0274-01

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,3,4,6-Tetrachlorophenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2,4,5-Trichlorophenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2,4,6-Trichlorophenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2,4-Dichlorophenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2,4-Dimethylphenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2,4-Dinitrophenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2,4-Dinitrotoluene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2,6-Dichlorophenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2,6-Dinitrotoluene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2-Chloronaphthalene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2-Chlorophenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2-Methylnaphthalene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2-Naphthylamine	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2-Nitroaniline	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2-Nitrophenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
3,3'-Dichlorobenzidine	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
3-Methylcholanthrene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
3-Nitroaniline	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
4,6-Dinitro-2-methylphenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
4-Aminobiphenyl	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
4-Bromophenyl phenyl ether	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
4-Chloroaniline	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
4-Chlorophenyl phenyl ether	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
4-Nitroaniline	01	SW8270D	<0.176 mg/kg dry	C	0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
4-Nitrophenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
7,12-Dimethylbenz (a) anthracene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-12 **Laboratory Sample ID:** 17J0274-01

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acenaphthene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Acenaphthylene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Acetophenone	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Aniline	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Anthracene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Benzidine	01	SW8270D	<0.176 mg/kg dry	C	0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Benzo (a) anthracene	01	SW8270D	**0.325 mg/kg dry**		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Benzo (a) pyrene	01	SW8270D	**0.218 mg/kg dry**		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Benzo (b) fluoranthene	01	SW8270D	**0.658 mg/kg dry**		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Benzo (g,h,i) perylene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Benzo (k) fluoranthene	01	SW8270D	**0.241 mg/kg dry**		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Benzoic acid	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Benzyl alcohol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
bis (2-Chloroethoxy) methane	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
bis (2-Chloroethyl) ether	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
2,2'-Oxybis (1-chloropropane)	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
bis (2-Ethylhexyl) phthalate	01	SW8270D	<0.176 mg/kg dry	C	0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Butyl benzyl phthalate	01	SW8270D	<0.176 mg/kg dry	C	0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Chrysene	01	SW8270D	**0.460 mg/kg dry**		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Dibenz (a,h) anthracene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Dibenz (a,j) acridine	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Dibenzofuran	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Diethyl phthalate	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Dimethyl phthalate	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Di-n-butyl phthalate	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Di-n-octyl phthalate	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-12 **Laboratory Sample ID:** 17J0274-01

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Diphenylamine	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Ethyl methanesulfonate	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Fluoranthene	01	SW8270D	**0.553 mg/kg dry**		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Fluorene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Hexachlorobenzene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Hexachlorobutadiene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Hexachlorocyclopentadiene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Hexachloroethane	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Indeno (1,2,3-cd) pyrene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Isophorone	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
m+p-Cresols	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Methyl methanesulfonate	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Naphthalene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Nitrobenzene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
n-Nitrosodimethylamine	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
n-Nitrosodi-n-butylamine	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
n-Nitrosodi-n-propylamine	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
n-Nitrosodiphenylamine	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
n-Nitrosopiperidine	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
o+m+p-Cresols	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
o-Cresol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
p-(Dimethylamino) azobenzene	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
p-Chloro-m-cresol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Pentachloronitrobenzene (quintozene)	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Pentachlorophenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-12 **Laboratory Sample ID:** 17J0274-01

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenacetin	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Phenanthrene	01	SW8270D	**0.273 mg/kg dry**		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Phenol	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Pronamide	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Pyrene	01	SW8270D	**0.348 mg/kg dry**		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Pyridine	01	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 16:47	SKS
Surr: 2,4,6-Tribromophenol (Surr)	*01*	*SW8270D*	*51.5 %*		*35-125*		*10/18/17 09:47*	*10/18/17 16:47*	*SKS*
Surr: 2-Fluorobiphenyl (Surr)	*01*	*SW8270D*	*52.4 %*		*45-105*		*10/18/17 09:47*	*10/18/17 16:47*	*SKS*
Surr: 2-Fluorophenol (Surr)	*01*	*SW8270D*	*35.7 %*		*35-105*		*10/18/17 09:47*	*10/18/17 16:47*	*SKS*
Surr: Nitrobenzene-d5 (Surr)	*01*	*SW8270D*	*52.3 %*		*35-100*		*10/18/17 09:47*	*10/18/17 16:47*	*SKS*
Surr: Phenol-d5 (Surr)	*01*	*SW8270D*	*50.9 %*		*40-100*		*10/18/17 09:47*	*10/18/17 16:47*	*SKS*
Surr: p-Terphenyl-d14 (Surr)	*01*	*SW8270D*	*46.8 %*		*30-125*		*10/18/17 09:47*	*10/18/17 16:47*	*SKS*
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	01	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 15:23	LBH
PCB as Aroclor 1221	01	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 15:23	LBH
PCB as Aroclor 1232	01	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 15:23	LBH
PCB as Aroclor 1242	01	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 15:23	LBH
PCB as Aroclor 1248	01	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 15:23	LBH
PCB as Aroclor 1254	01	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 15:23	LBH
PCB as Aroclor 1260	01	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 15:23	LBH
PCBs, Total	01	SW8082A	<0.948 mg/kg dry		0.948	1	10/16/17 13:10	10/17/17 15:23	LBH
Surr: DCB	*01*	*SW8082A*	*90.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 15:23*	*LBH*
Surr: TCMX	*01*	*SW8082A*	*75.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 15:23*	*LBH*
4,4'-DDD	01	SW8081B	<0.00632 mg/kg dry		0.00632	1	10/16/17 13:10	10/17/17 15:23	LBH

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Final Report

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-12 **Laboratory Sample ID:** 17J0274-01

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	01	SW8081B	<0.00422 mg/kg dry		0.00422	1	10/16/17 13:10	10/17/17 15:23	LBH
4,4'-DDT	01	SW8081B	<0.00422 mg/kg dry		0.00422	1	10/16/17 13:10	10/17/17 15:23	LBH
Aldrin	01	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 15:23	LBH
alpha-BHC	01	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 15:23	LBH
beta-BHC	01	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 15:23	LBH
Chlordane	01	SW8081B	<0.0443 mg/kg dry		0.0443	1	10/16/17 13:10	10/17/17 15:23	LBH
delta-BHC	01	SW8081B	<0.00422 mg/kg dry		0.00422	1	10/16/17 13:10	10/17/17 15:23	LBH
Dieldrin	01	SW8081B	<0.00422 mg/kg dry		0.00422	1	10/16/17 13:10	10/17/17 15:23	LBH
Endosulfan I	01	SW8081B	<0.00422 mg/kg dry		0.00422	1	10/16/17 13:10	10/17/17 15:23	LBH
Endosulfan II	01	SW8081B	<0.00632 mg/kg dry		0.00632	1	10/16/17 13:10	10/17/17 15:23	LBH
Endosulfan sulfate	01	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 15:23	LBH
Endrin	01	SW8081B	<0.00422 mg/kg dry		0.00422	1	10/16/17 13:10	10/17/17 15:23	LBH
Endrin aldehyde	01	SW8081B	<0.00843 mg/kg dry		0.00843	1	10/16/17 13:10	10/17/17 15:23	LBH
Endrin ketone	01	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 15:23	LBH
gamma-BHC (Lindane)	01	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 15:23	LBH
Heptachlor	01	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 15:23	LBH
Heptachlor epoxide	01	SW8081B	<0.0422 mg/kg dry		0.0422	1	10/16/17 13:10	10/17/17 15:23	LBH
Methoxychlor	01	SW8081B	<0.0422 mg/kg dry		0.0422	1	10/16/17 13:10	10/17/17 15:23	LBH
Mirex	01	SW8081B	<0.00632 mg/kg dry		0.00632	1	10/16/17 13:10	10/17/17 15:23	LBH
Toxaphene	01	SW8081B	<0.0443 mg/kg dry		0.0443	1	10/16/17 13:10	10/17/17 15:23	LBH
Surr: TCMX	*01*	*SW8081B*	*70.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 15:23*	*LBH*

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Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-12 **Laboratory Sample ID:** 17J0274-01

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Surr: DCB	*01*	*SW8081B*	*90.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 15:23*	*LBH*
Wet Chemistry Analysis									
Cyanide	01	SW9012B	<0.93 mg/kg dry		0.93	1	10/19/17 15:23	10/19/17 15:23	BBP
Percent Solids	01	SM18 2540G	**94.3 %**		0.10	1	10/09/17 17:35	10/09/17 17:35	JCM

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Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-24 **Laboratory Sample ID:** 17J0274-02

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02	SW6010C	<0.526 mg/kg dry		0.526	1	10/12/17 10:30	10/13/17 12:50	BG
Arsenic	02	SW6010C	**8.48 mg/kg dry**		1.05	1	10/12/17 10:30	10/13/17 12:50	BG
Barium	02	SW6010C	**16.2 mg/kg dry**		0.526	1	10/12/17 10:30	10/13/17 12:50	BG
Beryllium	02	SW6010C	<0.211 mg/kg dry		0.211	1	10/12/17 10:30	10/13/17 12:50	BG
Cadmium	02	SW6010C	**0.267 mg/kg dry**		0.211	1	10/12/17 10:30	10/13/17 12:50	BG
Cobalt	02	SW6010C	**0.857 mg/kg dry**		0.211	1	10/12/17 10:30	10/13/17 12:50	BG
Chromium	02	SW6010C	**11.4 mg/kg dry**		0.526	1	10/12/17 10:30	10/13/17 12:50	BG
Copper	02	SW6010C	**6.28 mg/kg dry**		2.63	1	10/12/17 10:30	10/13/17 12:50	BG
Iron	02RE1	SW6010C	**3240 mg/kg dry**		26.3	10	10/12/17 10:30	10/13/17 13:37	BG
Mercury	02	SW7471B	**0.009 mg/kg dry**		0.008	1	10/12/17 09:50	10/13/17 08:30	RCV
Nickel	02	SW6010C	**1.84 mg/kg dry**		0.526	1	10/12/17 10:30	10/13/17 12:50	BG
Lead	02	SW6010C	**3.70 mg/kg dry**		0.526	1	10/12/17 10:30	10/13/17 12:50	BG
Antimony	02	SW6010C	<5.26 mg/kg dry		5.26	1	10/12/17 10:30	10/13/17 12:50	BG
Selenium	02	SW6010C	<2.63 mg/kg dry		2.63	1	10/12/17 10:30	10/13/17 12:50	BG
Thallium	02	SW6010C	<2.63 mg/kg dry		2.63	1	10/12/17 10:30	10/13/17 12:50	BG
Vanadium	02	SW6010C	**6.60 mg/kg dry**		0.526	1	10/12/17 10:30	10/13/17 12:50	BG
Zinc	02	SW6010C	**6.60 mg/kg dry**		0.526	1	10/12/17 10:30	10/13/17 12:50	BG
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
1,2,4-Trichlorobenzene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
1,2-Dichlorobenzene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
1,2-Diphenylhydrazine	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
1,3-Dichlorobenzene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
1,4-Dichlorobenzene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
1-Chloronaphthalene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
1-Naphthylamine	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
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Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-24 **Laboratory Sample ID:** 17J0274-02

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,3,4,6-Tetrachlorophenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2,4,5-Trichlorophenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2,4,6-Trichlorophenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2,4-Dichlorophenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2,4-Dimethylphenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2,4-Dinitrophenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2,4-Dinitrotoluene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2,6-Dichlorophenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2,6-Dinitrotoluene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2-Chloronaphthalene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2-Chlorophenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2-Methylnaphthalene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2-Naphthylamine	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2-Nitroaniline	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2-Nitrophenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
3,3'-Dichlorobenzidine	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
3-Methylcholanthrene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
3-Nitroaniline	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
4,6-Dinitro-2-methylphenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
4-Aminobiphenyl	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
4-Bromophenyl phenyl ether	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
4-Chloroaniline	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
4-Chlorophenyl phenyl ether	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
4-Nitroaniline	02	SW8270D	<0.176 mg/kg dry	C	0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
4-Nitrophenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
7,12-Dimethylbenz (a) anthracene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS

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Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-24 **Laboratory Sample ID:** 17J0274-02

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acenaphthene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Acenaphthylene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Acetophenone	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Aniline	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Anthracene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Benzidine	02	SW8270D	<0.176 mg/kg dry	C	0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Benzo (a) anthracene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Benzo (a) pyrene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Benzo (b) fluoranthene	02	SW8270D	**0.259 mg/kg dry**		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Benzo (g,h,i) perylene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Benzo (k) fluoranthene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Benzoic acid	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Benzyl alcohol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
bis (2-Chloroethoxy) methane	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
bis (2-Chloroethyl) ether	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
2,2'-Oxybis (1-chloropropane)	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
bis (2-Ethylhexyl) phthalate	02	SW8270D	<0.176 mg/kg dry	C	0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Butyl benzyl phthalate	02	SW8270D	<0.176 mg/kg dry	C	0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Chrysene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Dibenz (a,h) anthracene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Dibenz (a,j) acridine	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Dibenzofuran	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Diethyl phthalate	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Dimethyl phthalate	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Di-n-butyl phthalate	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Di-n-octyl phthalate	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-24 **Laboratory Sample ID:** 17J0274-02

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Diphenylamine	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Ethyl methanesulfonate	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Fluoranthene	02	SW8270D	**0.181 mg/kg dry**		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Fluorene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Hexachlorobenzene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Hexachlorobutadiene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Hexachlorocyclopentadiene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Hexachloroethane	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Indeno (1,2,3-cd) pyrene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Isophorone	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
m+p-Cresols	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Methyl methanesulfonate	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Naphthalene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Nitrobenzene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
n-Nitrosodimethylamine	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
n-Nitrosodi-n-butylamine	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
n-Nitrosodi-n-propylamine	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
n-Nitrosodiphenylamine	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
n-Nitrosopiperidine	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
o+m+p-Cresols	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
o-Cresol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
p-(Dimethylamino) azobenzene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
p-Chloro-m-cresol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Pentachloronitrobenzene (quintozene)	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Pentachlorophenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-24 **Laboratory Sample ID:** 17J0274-02

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenacetin	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Phenanthrene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Phenol	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Pronamide	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Pyrene	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Pyridine	02	SW8270D	<0.176 mg/kg dry		0.176	2	10/18/17 09:47	10/18/17 18:11	SKS
Surr: 2,4,6-Tribromophenol (Surr)	*02*	*SW8270D*	*78.0 %*		*35-125*		*10/18/17 09:47*	*10/18/17 18:11*	*SKS*
Surr: 2-Fluorobiphenyl (Surr)	*02*	*SW8270D*	*79.1 %*		*45-105*		*10/18/17 09:47*	*10/18/17 18:11*	*SKS*
Surr: 2-Fluorophenol (Surr)	*02*	*SW8270D*	*54.5 %*		*35-105*		*10/18/17 09:47*	*10/18/17 18:11*	*SKS*
Surr: Nitrobenzene-d5 (Surr)	*02*	*SW8270D*	*76.3 %*		*35-100*		*10/18/17 09:47*	*10/18/17 18:11*	*SKS*
Surr: Phenol-d5 (Surr)	*02*	*SW8270D*	*77.7 %*		*40-100*		*10/18/17 09:47*	*10/18/17 18:11*	*SKS*
Surr: p-Terphenyl-d14 (Surr)	*02*	*SW8270D*	*77.2 %*		*30-125*		*10/18/17 09:47*	*10/18/17 18:11*	*SKS*
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	02	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 15:42	LBH
PCB as Aroclor 1221	02	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 15:42	LBH
PCB as Aroclor 1232	02	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 15:42	LBH
PCB as Aroclor 1242	02	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 15:42	LBH
PCB as Aroclor 1248	02	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 15:42	LBH
PCB as Aroclor 1254	02	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 15:42	LBH
PCB as Aroclor 1260	02	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 15:42	LBH
PCBs, Total	02	SW8082A	<0.900 mg/kg dry		0.900	1	10/16/17 13:10	10/17/17 15:42	LBH
Surr: DCB	*02*	*SW8082A*	*85.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 15:42*	*LBH*
Surr: TCMX	*02*	*SW8082A*	*75.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 15:42*	*LBH*
4,4'-DDD	02	SW8081B	<0.00600 mg/kg dry		0.00600	1	10/16/17 13:10	10/17/17 15:42	LBH

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-24 **Laboratory Sample ID:** 17J0274-02

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	02	SW8081B	<0.00400 mg/kg dry		0.00400	1	10/16/17 13:10	10/17/17 15:42	LBH
4,4'-DDT	02	SW8081B	<0.00400 mg/kg dry		0.00400	1	10/16/17 13:10	10/17/17 15:42	LBH
Aldrin	02	SW8081B	<0.00200 mg/kg dry		0.00200	1	10/16/17 13:10	10/17/17 15:42	LBH
alpha-BHC	02	SW8081B	<0.00200 mg/kg dry		0.00200	1	10/16/17 13:10	10/17/17 15:42	LBH
beta-BHC	02	SW8081B	<0.00200 mg/kg dry		0.00200	1	10/16/17 13:10	10/17/17 15:42	LBH
Chlordane	02	SW8081B	<0.0420 mg/kg dry		0.0420	1	10/16/17 13:10	10/17/17 15:42	LBH
delta-BHC	02	SW8081B	<0.00400 mg/kg dry		0.00400	1	10/16/17 13:10	10/17/17 15:42	LBH
Dieldrin	02	SW8081B	<0.00400 mg/kg dry		0.00400	1	10/16/17 13:10	10/17/17 15:42	LBH
Endosulfan I	02	SW8081B	<0.00400 mg/kg dry		0.00400	1	10/16/17 13:10	10/17/17 15:42	LBH
Endosulfan II	02	SW8081B	<0.00600 mg/kg dry		0.00600	1	10/16/17 13:10	10/17/17 15:42	LBH
Endosulfan sulfate	02	SW8081B	<0.00200 mg/kg dry		0.00200	1	10/16/17 13:10	10/17/17 15:42	LBH
Endrin	02	SW8081B	<0.00400 mg/kg dry		0.00400	1	10/16/17 13:10	10/17/17 15:42	LBH
Endrin aldehyde	02	SW8081B	<0.00800 mg/kg dry		0.00800	1	10/16/17 13:10	10/17/17 15:42	LBH
Endrin ketone	02	SW8081B	<0.00200 mg/kg dry		0.00200	1	10/16/17 13:10	10/17/17 15:42	LBH
gamma-BHC (Lindane)	02	SW8081B	<0.00200 mg/kg dry		0.00200	1	10/16/17 13:10	10/17/17 15:42	LBH
Heptachlor	02	SW8081B	<0.00200 mg/kg dry		0.00200	1	10/16/17 13:10	10/17/17 15:42	LBH
Heptachlor epoxide	02	SW8081B	<0.0400 mg/kg dry		0.0400	1	10/16/17 13:10	10/17/17 15:42	LBH

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Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-2-24 **Laboratory Sample ID:** 17J0274-02

Composite Start-End Date/Time: 10/06/2017 11:45 - 10/06/2017 11:45

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	02	SW8081B	<0.0400 mg/kg dry		0.0400	1	10/16/17 13:10	10/17/17 15:42	LBH
Mirex	02	SW8081B	<0.00600 mg/kg dry		0.00600	1	10/16/17 13:10	10/17/17 15:42	LBH
Toxaphene	02	SW8081B	<0.0420 mg/kg dry		0.0420	1	10/16/17 13:10	10/17/17 15:42	LBH
Surr: TCMX	*02*	*SW8081B*	*75.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 15:42*	*LBH*
Surr: DCB	*02*	*SW8081B*	*85.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 15:42*	*LBH*
Wet Chemistry Analysis									
Cyanide	02	SW9012B	<1.05 mg/kg dry		1.05	1	10/19/17 15:26	10/19/17 15:26	BBP
Percent Solids	02	SM18 2540G	**94.1 %**		0.10	1	10/09/17 17:35	10/09/17 17:35	JCM

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Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-12 **Laboratory Sample ID:** 17J0274-03

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03	SW6010C	<0.515 mg/kg dry		0.515	1	10/12/17 10:30	10/13/17 12:52	BG
Arsenic	03	SW6010C	**19.8 mg/kg dry**		1.03	1	10/12/17 10:30	10/13/17 12:52	BG
Barium	03	SW6010C	**26.7 mg/kg dry**		0.515	1	10/12/17 10:30	10/13/17 12:52	BG
Beryllium	03	SW6010C	<0.206 mg/kg dry		0.206	1	10/12/17 10:30	10/13/17 12:52	BG
Cadmium	03	SW6010C	**0.541 mg/kg dry**		0.206	1	10/12/17 10:30	10/13/17 12:52	BG
Cobalt	03	SW6010C	**2.06 mg/kg dry**		0.206	1	10/12/17 10:30	10/13/17 12:52	BG
Chromium	03	SW6010C	**30.3 mg/kg dry**		0.515	1	10/12/17 10:30	10/13/17 12:52	BG
Copper	03	SW6010C	**15.3 mg/kg dry**		2.58	1	10/12/17 10:30	10/13/17 12:52	BG
Iron	03RE1	SW6010C	**6520 mg/kg dry**		25.8	10	10/12/17 10:30	10/13/17 13:39	BG
Mercury	03	SW7471B	**0.020 mg/kg dry**		0.008	1	10/12/17 09:50	10/13/17 08:41	RCV
Nickel	03	SW6010C	**3.99 mg/kg dry**		0.515	1	10/12/17 10:30	10/13/17 12:52	BG
Lead	03	SW6010C	**10.6 mg/kg dry**		0.515	1	10/12/17 10:30	10/13/17 12:52	BG
Antimony	03	SW6010C	<5.15 mg/kg dry		5.15	1	10/12/17 10:30	10/13/17 12:52	BG
Selenium	03	SW6010C	<2.58 mg/kg dry		2.58	1	10/12/17 10:30	10/13/17 12:52	BG
Thallium	03	SW6010C	<2.58 mg/kg dry		2.58	1	10/12/17 10:30	10/13/17 12:52	BG
Vanadium	03	SW6010C	**9.30 mg/kg dry**		0.515	1	10/12/17 10:30	10/13/17 12:52	BG
Zinc	03	SW6010C	**24.4 mg/kg dry**		0.515	1	10/12/17 10:30	10/13/17 12:52	BG
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
1,2,4-Trichlorobenzene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
1,2-Dichlorobenzene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
1,2-Diphenylhydrazine	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
1,3-Dichlorobenzene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
1,4-Dichlorobenzene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
1-Chloronaphthalene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
1-Naphthylamine	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-12 **Laboratory Sample ID:** 17J0274-03

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,3,4,6-Tetrachlorophenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2,4,5-Trichlorophenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2,4,6-Trichlorophenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2,4-Dichlorophenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2,4-Dimethylphenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2,4-Dinitrophenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2,4-Dinitrotoluene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2,6-Dichlorophenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2,6-Dinitrotoluene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2-Chloronaphthalene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2-Chlorophenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2-Methylnaphthalene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2-Naphthylamine	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2-Nitroaniline	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2-Nitrophenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
3,3'-Dichlorobenzidine	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
3-Methylcholanthrene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
3-Nitroaniline	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
4,6-Dinitro-2-methylphenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
4-Aminobiphenyl	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
4-Bromophenyl phenyl ether	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
4-Chloroaniline	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
4-Chlorophenyl phenyl ether	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
4-Nitroaniline	03	SW8270D	<0.316 mg/kg dry	C	0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
4-Nitrophenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
7,12-Dimethylbenz (a) anthracene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-12 **Laboratory Sample ID:** 17J0274-03

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acenaphthene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Acenaphthylene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Acetophenone	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Aniline	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Anthracene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Benzidine	03	SW8270D	<0.316 mg/kg dry	C	0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Benzo (a) anthracene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Benzo (a) pyrene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Benzo (b) fluoranthene	03	SW8270D	**0.577 mg/kg dry**		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Benzo (g,h,i) perylene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Benzo (k) fluoranthene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Benzoic acid	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Benzyl alcohol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
bis (2-Chloroethoxy) methane	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
bis (2-Chloroethyl) ether	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
2,2'-Oxybis (1-chloropropane)	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
bis (2-Ethylhexyl) phthalate	03	SW8270D	<0.316 mg/kg dry	C	0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Butyl benzyl phthalate	03	SW8270D	<0.316 mg/kg dry	C	0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Chrysene	03	SW8270D	**0.393 mg/kg dry**		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Dibenz (a,h) anthracene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Dibenz (a,j) acridine	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Dibenzofuran	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Diethyl phthalate	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Dimethyl phthalate	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Di-n-butyl phthalate	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Di-n-octyl phthalate	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-12 **Laboratory Sample ID:** 17J0274-03

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Diphenylamine	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Ethyl methanesulfonate	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Fluoranthene	03	SW8270D	**0.470 mg/kg dry**		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Fluorene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Hexachlorobenzene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Hexachlorobutadiene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Hexachlorocyclopentadiene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Hexachloroethane	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Indeno (1,2,3-cd) pyrene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Isophorone	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
m+p-Cresols	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Methyl methanesulfonate	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Naphthalene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Nitrobenzene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
n-Nitrosodimethylamine	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
n-Nitrosodi-n-butylamine	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
n-Nitrosodi-n-propylamine	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
n-Nitrosodiphenylamine	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
n-Nitrosopiperidine	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
o+m+p-Cresols	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
o-Cresol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
p-(Dimethylamino) azobenzene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
p-Chloro-m-cresol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Pentachloronitrobenzene (quintozene)	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Pentachlorophenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS

AIR WATER SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-12 **Laboratory Sample ID:** 17J0274-03

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenacetin	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Phenanthrene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Phenol	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Pronamide	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Pyrene	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Pyridine	03	SW8270D	<0.316 mg/kg dry		0.316	4	10/18/17 09:47	10/18/17 18:43	SKS
Surr: 2,4,6-Tribromophenol (Surr)	*03*	*SW8270D*	*51.6 %*		*35-125*		*10/18/17 09:47*	*10/18/17 18:43*	*SKS*
Surr: 2-Fluorobiphenyl (Surr)	*03*	*SW8270D*	*61.3 %*		*45-105*		*10/18/17 09:47*	*10/18/17 18:43*	*SKS*
Surr: 2-Fluorophenol (Surr)	*03*	*SW8270D*	*36.2 %*		*35-105*		*10/18/17 09:47*	*10/18/17 18:43*	*SKS*
Surr: Nitrobenzene-d5 (Surr)	*03*	*SW8270D*	*64.2 %*		*35-100*		*10/18/17 09:47*	*10/18/17 18:43*	*SKS*
Surr: Phenol-d5 (Surr)	*03*	*SW8270D*	*34.0 %*	*DS*	*40-100*		*10/18/17 09:47*	*10/18/17 18:43*	*SKS*
Surr: p-Terphenyl-d14 (Surr)	*03*	*SW8270D*	*53.6 %*		*30-125*		*10/18/17 09:47*	*10/18/17 18:43*	*SKS*
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	03	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 16:38	LBH
PCB as Aroclor 1221	03	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 16:38	LBH
PCB as Aroclor 1232	03	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 16:38	LBH
PCB as Aroclor 1242	03	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 16:38	LBH
PCB as Aroclor 1248	03	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 16:38	LBH
PCB as Aroclor 1254	03	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 16:38	LBH
PCB as Aroclor 1260	03	SW8082A	<0.100 mg/kg dry		0.100	1	10/16/17 13:10	10/17/17 16:38	LBH
PCBs, Total	03	SW8082A	<0.902 mg/kg dry		0.902	1	10/16/17 13:10	10/17/17 16:38	LBH
Surr: DCB	*03*	*SW8082A*	*90.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 16:38*	*LBH*
Surr: TCMX	*03*	*SW8082A*	*80.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 16:38*	*LBH*
4,4'-DDD	03	SW8081B	<0.00602 mg/kg dry		0.00602	1	10/16/17 13:10	10/17/17 16:38	LBH

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-12 **Laboratory Sample ID:** 17J0274-03

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	03	SW8081B	<0.00401 mg/kg dry		0.00401	1	10/16/17 13:10	10/17/17 16:38	LBH
4,4'-DDT	03	SW8081B	<0.00401 mg/kg dry		0.00401	1	10/16/17 13:10	10/17/17 16:38	LBH
Aldrin	03	SW8081B	<0.00201 mg/kg dry		0.00201	1	10/16/17 13:10	10/17/17 16:38	LBH
alpha-BHC	03	SW8081B	<0.00201 mg/kg dry		0.00201	1	10/16/17 13:10	10/17/17 16:38	LBH
beta-BHC	03	SW8081B	<0.00201 mg/kg dry		0.00201	1	10/16/17 13:10	10/17/17 16:38	LBH
Chlordane	03	SW8081B	<0.0421 mg/kg dry		0.0421	1	10/16/17 13:10	10/17/17 16:38	LBH
delta-BHC	03	SW8081B	<0.00401 mg/kg dry		0.00401	1	10/16/17 13:10	10/17/17 16:38	LBH
Dieldrin	03	SW8081B	<0.00401 mg/kg dry		0.00401	1	10/16/17 13:10	10/17/17 16:38	LBH
Endosulfan I	03	SW8081B	<0.00401 mg/kg dry		0.00401	1	10/16/17 13:10	10/17/17 16:38	LBH
Endosulfan II	03	SW8081B	<0.00602 mg/kg dry		0.00602	1	10/16/17 13:10	10/17/17 16:38	LBH
Endosulfan sulfate	03	SW8081B	<0.00201 mg/kg dry		0.00201	1	10/16/17 13:10	10/17/17 16:38	LBH
Endrin	03	SW8081B	<0.00401 mg/kg dry		0.00401	1	10/16/17 13:10	10/17/17 16:38	LBH
Endrin aldehyde	03	SW8081B	<0.00802 mg/kg dry		0.00802	1	10/16/17 13:10	10/17/17 16:38	LBH
Endrin ketone	03	SW8081B	<0.00201 mg/kg dry		0.00201	1	10/16/17 13:10	10/17/17 16:38	LBH
gamma-BHC (Lindane)	03	SW8081B	<0.00201 mg/kg dry		0.00201	1	10/16/17 13:10	10/17/17 16:38	LBH
Heptachlor	03	SW8081B	<0.00201 mg/kg dry		0.00201	1	10/16/17 13:10	10/17/17 16:38	LBH
Heptachlor epoxide	03	SW8081B	<0.0401 mg/kg dry		0.0401	1	10/16/17 13:10	10/17/17 16:38	LBH

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-12 **Laboratory Sample ID:** 17J0274-03

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	03	SW8081B	<0.0401 mg/kg dry		0.0401	1	10/16/17 13:10	10/17/17 16:38	LBH
Mirex	03	SW8081B	<0.00602 mg/kg dry		0.00602	1	10/16/17 13:10	10/17/17 16:38	LBH
Toxaphene	03	SW8081B	<0.0421 mg/kg dry		0.0421	1	10/16/17 13:10	10/17/17 16:38	LBH
Surr: TCMX	*03*	*SW8081B*	*70.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 16:38*	*LBH*
Surr: DCB	*03*	*SW8081B*	*75.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 16:38*	*LBH*
Wet Chemistry Analysis									
Cyanide	03	SW9012B	<1.00 mg/kg dry		1.00	1	10/19/17 15:29	10/19/17 15:29	BBP
Percent Solids	03	SM18 2540G	**95.0 %**		0.10	1	10/09/17 17:35	10/09/17 17:35	JCM

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Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-24 **Laboratory Sample ID:** 17J0274-04

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04	SW6010C	<0.516 mg/kg dry		0.516	1	10/12/17 10:30	10/13/17 12:54	BG
Arsenic	04	SW6010C	**1.62 mg/kg dry**		1.03	1	10/12/17 10:30	10/13/17 12:55	BG
Barium	04	SW6010C	**18.5 mg/kg dry**		0.516	1	10/12/17 10:30	10/13/17 12:54	BG
Beryllium	04	SW6010C	<0.206 mg/kg dry		0.206	1	10/12/17 10:30	10/13/17 12:54	BG
Cadmium	04	SW6010C	**0.274 mg/kg dry**		0.206	1	10/12/17 10:30	10/13/17 12:55	BG
Cobalt	04	SW6010C	**0.703 mg/kg dry**		0.206	1	10/12/17 10:30	10/13/17 12:55	BG
Chromium	04	SW6010C	**5.64 mg/kg dry**		0.516	1	10/12/17 10:30	10/13/17 12:55	BG
Copper	04	SW6010C	<2.58 mg/kg dry		2.58	1	10/12/17 10:30	10/13/17 12:54	BG
Iron	04RE1	SW6010C	**3820 mg/kg dry**		25.8	10	10/12/17 10:30	10/13/17 13:41	BG
Mercury	04	SW7471B	**0.008 mg/kg dry**		0.008	1	10/12/17 09:50	10/13/17 08:44	RCV
Nickel	04	SW6010C	**1.82 mg/kg dry**		0.516	1	10/12/17 10:30	10/13/17 12:55	BG
Lead	04	SW6010C	**3.82 mg/kg dry**		0.516	1	10/12/17 10:30	10/13/17 12:55	BG
Antimony	04	SW6010C	<5.16 mg/kg dry		5.16	1	10/12/17 10:30	10/13/17 12:55	BG
Selenium	04	SW6010C	<2.58 mg/kg dry		2.58	1	10/12/17 10:30	10/13/17 12:55	BG
Thallium	04	SW6010C	<2.58 mg/kg dry		2.58	1	10/12/17 10:30	10/13/17 12:55	BG
Vanadium	04	SW6010C	**7.55 mg/kg dry**		0.516	1	10/12/17 10:30	10/13/17 12:54	BG
Zinc	04	SW6010C	**7.53 mg/kg dry**		0.516	1	10/12/17 10:30	10/13/17 12:55	BG
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
1,2,4-Trichlorobenzene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
1,2-Dichlorobenzene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
1,2-Diphenylhydrazine	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
1,3-Dichlorobenzene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
1,4-Dichlorobenzene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
1-Chloronaphthalene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
1-Naphthylamine	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-24 **Laboratory Sample ID:** 17J0274-04

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,3,4,6-Tetrachlorophenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2,4,5-Trichlorophenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2,4,6-Trichlorophenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2,4-Dichlorophenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2,4-Dimethylphenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2,4-Dinitrophenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2,4-Dinitrotoluene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2,6-Dichlorophenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2,6-Dinitrotoluene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2-Chloronaphthalene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2-Chlorophenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2-Methylnaphthalene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2-Naphthylamine	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2-Nitroaniline	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2-Nitrophenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
3,3'-Dichlorobenzidine	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
3-Methylcholanthrene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
3-Nitroaniline	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
4,6-Dinitro-2-methylphenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
4-Aminobiphenyl	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
4-Bromophenyl phenyl ether	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
4-Chloroaniline	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
4-Chlorophenyl phenyl ether	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
4-Nitroaniline	04	SW8270D	<0.0853 mg/kg dry	C	0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
4-Nitrophenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
7,12-Dimethylbenz (a) anthracene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-24 **Laboratory Sample ID:** 17J0274-04

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acenaphthene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Acenaphthylene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Acetophenone	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Aniline	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Anthracene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Benzidine	04	SW8270D	<0.0853 mg/kg dry	C	0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Benzo (a) anthracene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Benzo (a) pyrene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Benzo (b) fluoranthene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Benzo (g,h,i) perylene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Benzo (k) fluoranthene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Benzoic acid	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Benzyl alcohol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
bis (2-Chloroethoxy) methane	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
bis (2-Chloroethyl) ether	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
2,2'-Oxybis (1-chloropropane)	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
bis (2-Ethylhexyl) phthalate	04	SW8270D	<0.0853 mg/kg dry	C	0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Butyl benzyl phthalate	04	SW8270D	<0.0853 mg/kg dry	C	0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Chrysene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Dibenz (a,h) anthracene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Dibenz (a,j) acridine	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Dibenzofuran	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Diethyl phthalate	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Dimethyl phthalate	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Di-n-butyl phthalate	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Di-n-octyl phthalate	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-24 **Laboratory Sample ID:** 17J0274-04

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Diphenylamine	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Ethyl methanesulfonate	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Fluoranthene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Fluorene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Hexachlorobenzene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Hexachlorobutadiene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Hexachlorocyclopentadiene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Hexachloroethane	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Indeno (1,2,3-cd) pyrene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Isophorone	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
m+p-Cresols	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Methyl methanesulfonate	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Naphthalene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Nitrobenzene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
n-Nitrosodimethylamine	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
n-Nitrosodi-n-butylamine	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
n-Nitrosodi-n-propylamine	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
n-Nitrosodiphenylamine	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
n-Nitrosopiperidine	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
o+m+p-Cresols	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
o-Cresol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
p-(Dimethylamino) azobenzene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
p-Chloro-m-cresol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Pentachloronitrobenzene (quintozene)	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Pentachlorophenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-24 **Laboratory Sample ID:** 17J0274-04

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Phenacetin	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Phenanthrene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Phenol	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Pronamide	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Pyrene	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Pyridine	04	SW8270D	<0.0853 mg/kg dry		0.0853	1	10/18/17 09:47	10/18/17 19:15	SKS
Surr: 2,4,6-Tribromophenol (Surr)	*04*	*SW8270D*	*79.2 %*		*35-125*		*10/18/17 09:47*	*10/18/17 19:15*	*SKS*
Surr: 2-Fluorobiphenyl (Surr)	*04*	*SW8270D*	*65.9 %*		*45-105*		*10/18/17 09:47*	*10/18/17 19:15*	*SKS*
Surr: 2-Fluorophenol (Surr)	*04*	*SW8270D*	*41.1 %*		*35-105*		*10/18/17 09:47*	*10/18/17 19:15*	*SKS*
Surr: Nitrobenzene-d5 (Surr)	*04*	*SW8270D*	*70.1 %*		*35-100*		*10/18/17 09:47*	*10/18/17 19:15*	*SKS*
Surr: Phenol-d5 (Surr)	*04*	*SW8270D*	*73.2 %*		*40-100*		*10/18/17 09:47*	*10/18/17 19:15*	*SKS*
Surr: p-Terphenyl-d14 (Surr)	*04*	*SW8270D*	*64.0 %*		*30-125*		*10/18/17 09:47*	*10/18/17 19:15*	*SKS*
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	04	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 16:57	LBH
PCB as Aroclor 1221	04	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 16:57	LBH
PCB as Aroclor 1232	04	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 16:57	LBH
PCB as Aroclor 1242	04	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 16:57	LBH
PCB as Aroclor 1248	04	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 16:57	LBH
PCB as Aroclor 1254	04	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 16:57	LBH
PCB as Aroclor 1260	04	SW8082A	<0.105 mg/kg dry		0.105	1	10/16/17 13:10	10/17/17 16:57	LBH
PCBs, Total	04	SW8082A	<0.949 mg/kg dry		0.949	1	10/16/17 13:10	10/17/17 16:57	LBH
Surr: DCB	*04*	*SW8082A*	*85.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 16:57*	*LBH*
Surr: TCMX	*04*	*SW8082A*	*75.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 16:57*	*LBH*
4,4'-DDD	04	SW8081B	<0.00632 mg/kg dry		0.00632	1	10/16/17 13:10	10/17/17 16:57	LBH

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-24 **Laboratory Sample ID:** 17J0274-04

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	04	SW8081B	<0.00422 mg/kg dry		0.00422	1	10/16/17 13:10	10/17/17 16:57	LBH
4,4'-DDT	04	SW8081B	<0.00422 mg/kg dry		0.00422	1	10/16/17 13:10	10/17/17 16:57	LBH
Aldrin	04	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 16:57	LBH
alpha-BHC	04	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 16:57	LBH
beta-BHC	04	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 16:57	LBH
Chlordane	04	SW8081B	<0.0443 mg/kg dry		0.0443	1	10/16/17 13:10	10/17/17 16:57	LBH
delta-BHC	04	SW8081B	<0.00422 mg/kg dry		0.00422	1	10/16/17 13:10	10/17/17 16:57	LBH
Dieldrin	04	SW8081B	<0.00422 mg/kg dry		0.00422	1	10/16/17 13:10	10/17/17 16:57	LBH
Endosulfan I	04	SW8081B	<0.00422 mg/kg dry		0.00422	1	10/16/17 13:10	10/17/17 16:57	LBH
Endosulfan II	04	SW8081B	<0.00632 mg/kg dry		0.00632	1	10/16/17 13:10	10/17/17 16:57	LBH
Endosulfan sulfate	04	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 16:57	LBH
Endrin	04	SW8081B	<0.00422 mg/kg dry		0.00422	1	10/16/17 13:10	10/17/17 16:57	LBH
Endrin aldehyde	04	SW8081B	<0.00843 mg/kg dry		0.00843	1	10/16/17 13:10	10/17/17 16:57	LBH
Endrin ketone	04	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 16:57	LBH
gamma-BHC (Lindane)	04	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 16:57	LBH
Heptachlor	04	SW8081B	<0.00211 mg/kg dry		0.00211	1	10/16/17 13:10	10/17/17 16:57	LBH
Heptachlor epoxide	04	SW8081B	<0.0422 mg/kg dry		0.0422	1	10/16/17 13:10	10/17/17 16:57	LBH
Methoxychlor	04	SW8081B	<0.0422 mg/kg dry		0.0422	1	10/16/17 13:10	10/17/17 16:57	LBH
Mirex	04	SW8081B	<0.00632 mg/kg dry		0.00632	1	10/16/17 13:10	10/17/17 16:57	LBH
Toxaphene	04	SW8081B	<0.0443 mg/kg dry		0.0443	1	10/16/17 13:10	10/17/17 16:57	LBH
Surr: TCMX	*04*	*SW8081B*	*75.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 16:57*	*LBH*

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Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0274

Analytical Results

Sample I.D. EA-4-24 **Laboratory Sample ID:** 17J0274-04

Composite Start-End Date/Time: 10/06/2017 16:00 - 10/06/2017 16:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Surr: DCB	*04*	*SW8081B*	*75.0 %*		*30-105*		*10/16/17 13:10*	*10/17/17 16:57*	*LBH*
Wet Chemistry Analysis									
Cyanide	04	SW9012B	<0.97 mg/kg dry		0.97	1	10/19/17 15:32	10/19/17 15:32	BBP
Percent Solids	04	SM18 2540G	**94.2 %**		0.10	1	10/09/17 17:35	10/09/17 17:35	JCM

AIR WATER & SOIL LABORATORIES, INC.

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Analytical Summary

Administrative	Preparation Method:
17J0274-01	SW8290
17J0274-02	SW8290
17J0274-03	SW8290
17J0274-04	SW8290

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		**Preparation Method:**	**No Prep Wet Chem**		
17J0274-01	1.00 g / 1.00 mL	SM18 2540G	BAJ0235	SAJ0260	
17J0274-02	1.00 g / 1.00 mL	SM18 2540G	BAJ0235	SAJ0260	
17J0274-03	1.00 g / 1.00 mL	SM18 2540G	BAJ0235	SAJ0260	
17J0274-04	1.00 g / 1.00 mL	SM18 2540G	BAJ0235	SAJ0260	
Wet Chemistry Analysis		**Preparation Method:**	**No Prep Wet Chem**		
17J0274-01	1.14 g / 100 mL	SW9012B	BAJ0593	SAJ0539	AJ70095
17J0274-02	1.01 g / 100 mL	SW9012B	BAJ0593	SAJ0539	AJ70095
17J0274-03	1.05 g / 100 mL	SW9012B	BAJ0593	SAJ0539	AJ70095
17J0274-04	1.09 g / 100 mL	SW9012B	BAJ0593	SAJ0539	AJ70095

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		**Preparation Method:**	**SW3050B**		
17J0274-01	1.02 g / 50.0 mL	SW6010C	BAJ0343	SAJ0375	AJ70064
17J0274-01RE1	1.02 g / 50.0 mL	SW6010C	BAJ0343	SAJ0375	AJ70064
17J0274-02	1.01 g / 50.0 mL	SW6010C	BAJ0343	SAJ0375	AJ70064
17J0274-02RE1	1.01 g / 50.0 mL	SW6010C	BAJ0343	SAJ0375	AJ70064
17J0274-03	1.02 g / 50.0 mL	SW6010C	BAJ0343	SAJ0375	AJ70064
17J0274-03RE1	1.02 g / 50.0 mL	SW6010C	BAJ0343	SAJ0375	AJ70064
17J0274-04	1.03 g / 50.0 mL	SW6010C	BAJ0343	SAJ0375	AJ70064
17J0274-04RE1	1.03 g / 50.0 mL	SW6010C	BAJ0343	SAJ0375	AJ70064

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD		**Preparation Method:**	**SW3550B**		
17J0274-01	30.2 g / 5.00 mL	SW8081B	BAJ0458	SAJ0400	AI70057

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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
17J0274-02	31.9 g / 5.00 mL	SW8081B	BAJ0458	SAJ0400	AI70057
17J0274-03	31.5 g / 5.00 mL	SW8081B	BAJ0458	SAJ0400	AI70057
17J0274-04	30.2 g / 5.00 mL	SW8081B	BAJ0458	SAJ0400	AI70057
17J0274-01	30.2 g / 5.00 mL	SW8082A	BAJ0458	SAJ0401	AI70058
17J0274-02	31.9 g / 5.00 mL	SW8082A	BAJ0458	SAJ0401	AI70058
17J0274-03	31.5 g / 5.00 mL	SW8082A	BAJ0458	SAJ0401	AI70058
17J0274-04	30.2 g / 5.00 mL	SW8082A	BAJ0458	SAJ0401	AI70058

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS		**Preparation Method:**	**SW3550C**		
17J0274-01	30.2 g / 1.00 mL	SW8270D	BAJ0530	SAJ0526	AI70063
17J0274-02	30.2 g / 1.00 mL	SW8270D	BAJ0530	SAJ0526	AI70063
17J0274-03	33.3 g / 1.00 mL	SW8270D	BAJ0530	SAJ0526	AI70063
17J0274-04	31.1 g / 1.00 mL	SW8270D	BAJ0530	SAJ0526	AI70063

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		**Preparation Method:**	**SW7470A**		
17J0274-01	0.549 g / 20.0 mL	SW7471B	BAJ0350	SAJ0345	AJ70059
17J0274-02	0.566 g / 20.0 mL	SW7471B	BAJ0350	SAJ0345	AJ70059
17J0274-03	0.524 g / 20.0 mL	SW7471B	BAJ0350	SAJ0345	AJ70059
17J0274-04	0.562 g / 20.0 mL	SW7471B	BAJ0350	SAJ0345	AJ70059

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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0343 - SW3050B										
Blank (BAJ0343-BLK1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Copper	<2.50 mg/kg wet	2.50	mg/kg wet							
Selenium	<2.50 mg/kg wet	2.50	mg/kg wet							
Antimony	<5.00 mg/kg wet	5.00	mg/kg wet							
Lead	<0.500 mg/kg wet	0.500	mg/kg wet							
Nickel	<0.500 mg/kg wet	0.500	mg/kg wet							
Iron	<2.50 mg/kg wet	2.50	mg/kg wet							
Thallium	<2.50 mg/kg wet	2.50	mg/kg wet							
Vanadium	<0.500 mg/kg wet	0.500	mg/kg wet							
Zinc	<0.500 mg/kg wet	0.500	mg/kg wet							
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet							
Cobalt	<0.200 mg/kg wet	0.200	mg/kg wet							
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet							
Beryllium	<0.200 mg/kg wet	0.200	mg/kg wet							
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet							
Barium	<0.500 mg/kg wet	0.500	mg/kg wet							
Silver	<0.500 mg/kg wet	0.500	mg/kg wet							
LCS (BAJ0343-BS1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Antimony	85.6 mg/kg wet	5.00	mg/kg wet	98.8	mg/kg wet	86.6	80-120			
Arsenic	89.4 mg/kg wet	1.00	mg/kg wet	98.8	mg/kg wet	90.4	80-120			
Selenium	87.7 mg/kg wet	2.50	mg/kg wet	98.8	mg/kg wet	88.7	80-120			
Silver	4.62 mg/kg wet	0.500	mg/kg wet	4.94	mg/kg wet	93.5	80-120			
Lead	92.6 mg/kg wet	0.500	mg/kg wet	98.8	mg/kg wet	93.7	80-120			
Copper	96.5 mg/kg wet	2.50	mg/kg wet	98.8	mg/kg wet	97.7	80-120			
Vanadium	94.9 mg/kg wet	0.500	mg/kg wet	98.8	mg/kg wet	96.1	80-120			
Cobalt	95.0 mg/kg wet	0.200	mg/kg wet	98.8	mg/kg wet	96.1	80-120			
Chromium	94.9 mg/kg wet	0.500	mg/kg wet	98.8	mg/kg wet	96.1	80-120			
Nickel	95.5 mg/kg wet	0.500	mg/kg wet	98.8	mg/kg wet	96.6	80-120			
Zinc	93.6 mg/kg wet	0.500	mg/kg wet	98.8	mg/kg wet	94.7	80-120			
Cadmium	94.3 mg/kg wet	0.200	mg/kg wet	98.8	mg/kg wet	95.4	80-120			
Iron	96.4 mg/kg wet	2.50	mg/kg wet	98.8	mg/kg wet	97.6	80-120			

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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0343 - SW3050B										
LCS (BAJ0343-BS1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Beryllium	92.6 mg/kg wet	0.200	mg/kg wet	98.8	mg/kg wet	93.7	80-120			
Barium	94.1 mg/kg wet	0.500	mg/kg wet	98.8	mg/kg wet	95.2	80-120			
Thallium	87.7 mg/kg wet	2.50	mg/kg wet	98.8	mg/kg wet	88.8	80-120			
LCS Dup (BAJ0343-BSD1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Antimony	82.5 mg/kg wet	5.00	mg/kg wet	96.5	mg/kg wet	85.5	80-120	3.64	20	
Copper	93.3 mg/kg wet	2.50	mg/kg wet	96.5	mg/kg wet	96.7	80-120	3.37	20	
Iron	92.3 mg/kg wet	2.50	mg/kg wet	96.5	mg/kg wet	95.6	80-120	4.41	20	
Thallium	84.0 mg/kg wet	2.50	mg/kg wet	96.5	mg/kg wet	87.0	80-120	4.40	20	
Barium	92.4 mg/kg wet	0.500	mg/kg wet	96.5	mg/kg wet	95.7	80-120	1.83	20	
Cadmium	90.9 mg/kg wet	0.200	mg/kg wet	96.5	mg/kg wet	94.2	80-120	3.65	20	
Chromium	91.8 mg/kg wet	0.500	mg/kg wet	96.5	mg/kg wet	95.1	80-120	3.41	20	
Lead	89.0 mg/kg wet	0.500	mg/kg wet	96.5	mg/kg wet	92.2	80-120	3.93	20	
Selenium	83.7 mg/kg wet	2.50	mg/kg wet	96.5	mg/kg wet	86.7	80-120	4.66	20	
Vanadium	91.5 mg/kg wet	0.500	mg/kg wet	96.5	mg/kg wet	94.8	80-120	3.65	20	
Arsenic	86.9 mg/kg wet	1.00	mg/kg wet	96.5	mg/kg wet	90.0	80-120	2.82	20	
Cobalt	91.8 mg/kg wet	0.200	mg/kg wet	96.5	mg/kg wet	95.1	80-120	3.42	20	
Nickel	92.0 mg/kg wet	0.500	mg/kg wet	96.5	mg/kg wet	95.3	80-120	3.68	20	
Beryllium	89.6 mg/kg wet	0.200	mg/kg wet	96.5	mg/kg wet	92.9	80-120	3.27	20	
Zinc	90.2 mg/kg wet	0.500	mg/kg wet	96.5	mg/kg wet	93.4	80-120	3.67	20	
Silver	4.58 mg/kg wet	0.500	mg/kg wet	4.83	mg/kg wet	94.9	80-120	0.812	20	
Matrix Spike (BAJ0343-MS1)		**Source: 17J0274-01**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Selenium	94.1 mg/kg dry	2.63	mg/kg dry	105	<2.63 mg/kg dry	89.3	75-125			
Antimony	38.3 mg/kg dry	5.27	mg/kg dry	105	<5.27 mg/kg dry	36.3	75-125			M
Iron	7030 mg/kg dry	2.63	mg/kg dry	105	4630 mg/kg dry	2280	75-125			M, E
Lead	106 mg/kg dry	0.527	mg/kg dry	105	11.7 mg/kg dry	89.7	75-125			
Nickel	101 mg/kg dry	0.527	mg/kg dry	105	4.33 mg/kg dry	91.9	75-125			
Silver	5.02 mg/kg dry	0.527	mg/kg dry	5.27	<0.527 mg/kg dry	95.2	75-125			
Chromium	197 mg/kg dry	0.527	mg/kg dry	105	135 mg/kg dry	59.3	75-125			M
Barium	119 mg/kg dry	0.527	mg/kg dry	105	26.9 mg/kg dry	87.7	75-125			
Beryllium	95.4 mg/kg dry	0.211	mg/kg dry	105	<0.211 mg/kg dry	90.6	75-125			

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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0343 - SW3050B										
Matrix Spike (BAJ0343-MS1)		**Source: 17J0274-01**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Cadmium	94.9 mg/kg dry	0.211	mg/kg dry	105	0.454 mg/kg dry	89.6	75-125			
Cobalt	97.4 mg/kg dry	0.211	mg/kg dry	105	1.85 mg/kg dry	90.7	75-125			
Thallium	88.0 mg/kg dry	2.63	mg/kg dry	105	<2.63 mg/kg dry	83.5	75-125			
Zinc	121 mg/kg dry	0.527	mg/kg dry	105	28.7 mg/kg dry	87.2	75-125			
Arsenic	228 mg/kg dry	1.05	mg/kg dry	105	83.4 mg/kg dry	137	75-125			M
Vanadium	106 mg/kg dry	0.527	mg/kg dry	105	8.16 mg/kg dry	93.3	75-125			
Copper	150 mg/kg dry	2.63	mg/kg dry	105	64.2 mg/kg dry	81.3	75-125			
Matrix Spike (BAJ0343-MS2)		**Source: 17J0444-09**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Nickel	81.8 mg/kg wet	0.500	mg/kg wet	93.5	3.80 mg/kg wet	83.4	75-125			
Selenium	68.1 mg/kg wet	2.50	mg/kg wet	93.5	<2.50 mg/kg wet	72.8	75-125			M
Iron	9900 mg/kg wet	2.50	mg/kg wet	93.5	9910 mg/kg wet	-6.11	75-125			M, E
Beryllium	79.6 mg/kg wet	0.200	mg/kg wet	93.5	<0.200 mg/kg wet	85.1	75-125			
Silver	4.09 mg/kg wet	0.500	mg/kg wet	4.68	<0.500 mg/kg wet	87.5	75-125			
Cobalt	81.5 mg/kg wet	0.200	mg/kg wet	93.5	3.54 mg/kg wet	83.4	75-125			
Antimony	14.9 mg/kg wet	5.00	mg/kg wet	93.5	<5.00 mg/kg wet	15.9	75-125			M
Barium	100 mg/kg wet	0.500	mg/kg wet	93.5	21.1 mg/kg wet	84.4	75-125			
Arsenic	68.2 mg/kg wet	1.00	mg/kg wet	93.5	1.94 mg/kg wet	70.8	75-125			M
Copper	84.5 mg/kg wet	2.50	mg/kg wet	93.5	<2.50 mg/kg wet	87.8	75-125			
Chromium	85.8 mg/kg wet	0.500	mg/kg wet	93.5	5.44 mg/kg wet	85.9	75-125			
Lead	89.7 mg/kg wet	0.500	mg/kg wet	93.5	12.0 mg/kg wet	83.1	75-125			
Cadmium	79.7 mg/kg wet	0.200	mg/kg wet	93.5	0.860 mg/kg wet	84.3	75-125			
Zinc	113 mg/kg wet	0.500	mg/kg wet	93.5	34.3 mg/kg wet	84.1	75-125			
Vanadium	91.2 mg/kg wet	0.500	mg/kg wet	93.5	12.9 mg/kg wet	83.8	75-125			
Thallium	70.0 mg/kg wet	2.50	mg/kg wet	93.5	<2.50 mg/kg wet	74.9	75-125			M
Matrix Spike (BAJ0343-MS5)		**Source: 17J0274-01RE1**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Iron	864 mg/kg dry	2.63	mg/kg dry	105	4960 mg/kg dry	-3890	75-125			M

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Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0343 - SW3050B										
Matrix Spike Dup (BAJ0343-MSD1)		**Source: 17J0274-01**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Barium	122 mg/kg dry	0.508	mg/kg dry	102	26.9 mg/kg dry	93.4	75-125	1.95	20	
Cobalt	98.4 mg/kg dry	0.203	mg/kg dry	102	1.85 mg/kg dry	95.1	75-125	1.04	20	
Cadmium	96.7 mg/kg dry	0.203	mg/kg dry	102	0.454 mg/kg dry	94.8	75-125	1.84	20	
Chromium	202 mg/kg dry	0.508	mg/kg dry	102	135 mg/kg dry	65.9	75-125	2.22	20	M
Beryllium	97.4 mg/kg dry	0.203	mg/kg dry	102	<0.203 mg/kg dry	96.0	75-125	2.06	20	
Antimony	37.9 mg/kg dry	5.08	mg/kg dry	102	<5.08 mg/kg dry	37.4	75-125	0.931	20	M
Selenium	95.7 mg/kg dry	2.54	mg/kg dry	102	<2.54 mg/kg dry	94.2	75-125	1.65	20	
Vanadium	105 mg/kg dry	0.508	mg/kg dry	102	8.16 mg/kg dry	95.1	75-125	1.59	20	
Thallium	92.7 mg/kg dry	2.54	mg/kg dry	102	<2.54 mg/kg dry	91.3	75-125	5.23	20	
Zinc	118 mg/kg dry	0.508	mg/kg dry	102	28.7 mg/kg dry	87.9	75-125	2.18	20	
Silver	5.17 mg/kg dry	0.508	mg/kg dry	5.08	<0.508 mg/kg dry	102	75-125	3.05	20	
Arsenic	163 mg/kg dry	1.02	mg/kg dry	102	83.4 mg/kg dry	78.2	75-125	33.4	20	P
Iron	4300 mg/kg dry	2.54	mg/kg dry	102	4630 mg/kg dry	-324	75-125	48.2	20	M, P, E
Copper	155 mg/kg dry	2.54	mg/kg dry	102	64.2 mg/kg dry	89.0	75-125	3.04	20	
Lead	108 mg/kg dry	0.508	mg/kg dry	102	11.7 mg/kg dry	94.6	75-125	1.46	20	
Nickel	101 mg/kg dry	0.508	mg/kg dry	102	4.33 mg/kg dry	94.8	75-125	0.546	20	
Matrix Spike Dup (BAJ0343-MSD2)		**Source: 17J0444-09**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Antimony	15.8 mg/kg wet	5.00	mg/kg wet	99.0	<5.00 mg/kg wet	16.0	75-125	5.94	20	M
Cobalt	89.3 mg/kg wet	0.200	mg/kg wet	99.0	3.54 mg/kg wet	86.6	75-125	9.07	20	
Zinc	121 mg/kg wet	0.500	mg/kg wet	99.0	34.3 mg/kg wet	87.7	75-125	6.93	20	
Lead	98.5 mg/kg wet	0.500	mg/kg wet	99.0	12.0 mg/kg wet	87.3	75-125	9.29	20	
Copper	92.3 mg/kg wet	2.50	mg/kg wet	99.0	<2.50 mg/kg wet	90.8	75-125	8.76	20	
Chromium	93.9 mg/kg wet	0.500	mg/kg wet	99.0	5.44 mg/kg wet	89.4	75-125	9.05	20	
Iron	10600 mg/kg wet	2.50	mg/kg wet	99.0	9910 mg/kg wet	701	75-125	6.83	20	M, E
Vanadium	99.2 mg/kg wet	0.500	mg/kg wet	99.0	12.9 mg/kg wet	87.2	75-125	8.38	20	
Cadmium	86.8 mg/kg wet	0.200	mg/kg wet	99.0	0.860 mg/kg wet	86.8	75-125	8.43	20	
Thallium	76.3 mg/kg wet	2.50	mg/kg wet	99.0	<2.50 mg/kg wet	77.0	75-125	8.55	20	
Nickel	89.9 mg/kg wet	0.500	mg/kg wet	99.0	3.80 mg/kg wet	86.9	75-125	9.36	20	
Barium	108 mg/kg wet	0.500	mg/kg wet	99.0	21.1 mg/kg wet	87.6	75-125	7.49	20	
Beryllium	86.9 mg/kg wet	0.200	mg/kg wet	99.0	<0.200 mg/kg wet	87.7	75-125	8.74	20	
Selenium	75.7 mg/kg wet	2.50	mg/kg wet	99.0	<2.50 mg/kg wet	76.5	75-125	10.6	20	

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0343 - SW3050B										
Matrix Spike Dup (BAJ0343-MSD2)		**Source: 17J0444-09**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Arsenic	75.2 mg/kg wet	1.00	mg/kg wet	99.0	1.94 mg/kg wet	74.0	75-125	9.79	20	M
Silver	4.40 mg/kg wet	0.500	mg/kg wet	4.95	<0.500 mg/kg wet	88.9	75-125	7.30	20	
Matrix Spike Dup (BAJ0343-MSD5)		**Source: 17J0274-01RE1**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Iron	4720 mg/kg dry	25.4	mg/kg dry	102	4960 mg/kg dry	-236	75-125	138	20	M, P
Batch BAJ0350 - SW7470A										
Blank (BAJ0350-BLK1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet							
LCS (BAJ0350-BS1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	0.085 mg/kg wet	0.008	mg/kg wet	0.0852	mg/kg wet	99.5	80-120			
LCS Dup (BAJ0350-BSD1)				Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	0.085 mg/kg wet	0.008	mg/kg wet	0.0846	mg/kg wet	101	80-120	0.694	20	
Matrix Spike (BAJ0350-MS1)		**Source: 17J0274-02**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	0.102 mg/kg dry	0.008	mg/kg dry	0.0909	0.009 mg/kg dry	103	80-120			
Matrix Spike Dup (BAJ0350-MSD1)		**Source: 17J0274-02**		Prepared: 10/12/2017 Analyzed: 10/13/2017						
Mercury	0.108 mg/kg dry	0.008	mg/kg dry	0.0984	0.009 mg/kg dry	101	80-120	6.09	20	

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0530 - SW3550C										
Blank (BAJ0530-BLK1)				Prepared & Analyzed: 10/18/2017						
1,2,4,5-Tetrachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1,2,4-Trichlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1,2-Dichlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1,2-Diphenylhydrazine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1,3-Dichlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1,4-Dichlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1-Chloronaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
1-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,3,4,6-Tetrachlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4,5-Trichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4,6-Trichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4-Dichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4-Dimethylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4-Dinitrophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,4-Dinitrotoluene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,6-Dichlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,6-Dinitrotoluene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2-Chloronaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2-Chlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2-Methylnaphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2-Naphthylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2-Nitrophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
3,3'-Dichlorobenzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
3-Methylcholanthrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
3-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4,6-Dinitro-2-methylphenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Aminobiphenyl	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Bromophenyl phenyl ether	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Chloroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Chlorophenyl phenyl ether	<0.0833 mg/kg wet	0.0833	mg/kg wet							

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0530 - SW3550C										
Blank (BAJ0530-BLK1)				Prepared & Analyzed: 10/18/2017						
4-Nitroaniline	<0.0833 mg/kg wet	0.0833	mg/kg wet							
4-Nitrophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
7,12-Dimethylbenz (a) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Acenaphthene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Acenaphthylene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Acetophenone	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Aniline	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzidine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (a) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (a) pyrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (b) fluoranthene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (g,h,i) perylene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzo (k) fluoranthene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzoic acid	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Benzyl alcohol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
bis (2-Chloroethoxy) methane	<0.0833 mg/kg wet	0.0833	mg/kg wet							
bis (2-Chloroethyl) ether	<0.0833 mg/kg wet	0.0833	mg/kg wet							
2,2'-Oxybis (1-chloropropane)	<0.0833 mg/kg wet	0.0833	mg/kg wet							
bis (2-Ethylhexyl) phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Butyl benzyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Chrysene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Dibenz (a,h) anthracene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Dibenz (a,j) acridine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Dibenzofuran	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Diethyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Dimethyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Di-n-butyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Di-n-octyl phthalate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Diphenylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Ethyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet							

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0530 - SW3550C										
Blank (BAJ0530-BLK1)				Prepared & Analyzed: 10/18/2017						
Fluoranthene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Fluorene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Hexachlorobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Hexachlorobutadiene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Hexachlorocyclopentadiene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Hexachloroethane	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Indeno (1,2,3-cd) pyrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Isophorone	<0.0833 mg/kg wet	0.0833	mg/kg wet							
m+p-Cresols	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Methyl methanesulfonate	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Naphthalene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Nitrobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
n-Nitrosodimethylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
n-Nitrosodi-n-butylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
n-Nitrosodi-n-propylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
n-Nitrosodiphenylamine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
n-Nitrosopiperidine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
o+m+p-Cresols	<0.0833 mg/kg wet	0.0833	mg/kg wet							
o-Cresol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
p-(Dimethylamino) azobenzene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
p-Chloro-m-cresol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Pentachloronitrobenzene (quintozene)	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Pentachlorophenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Phenacetin	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Phenanthrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Phenol	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Pronamide	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Pyrene	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Pyridine	<0.0833 mg/kg wet	0.0833	mg/kg wet							
Surr: 2,4,6-Tribromophenol (Surr)	2.91		mg/kg wet	3.19		91.1	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1.25		mg/kg wet	1.60		78.4	45-105			

AIR WATER & SOIL LABORATORIES, INC.

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0530 - SW3550C										
Blank (BAJ0530-BLK1)				Prepared & Analyzed: 10/18/2017						
Surr: 2-Fluorophenol (Surr)	1.61		mg/kg wet	3.19		50.5	35-105			
Surr: Nitrobenzene-d5 (Surr)	1.32		mg/kg wet	1.60		82.8	35-100			
Surr: Phenol-d5 (Surr)	2.78		mg/kg wet	3.19		87.0	40-100			
Surr: p-Terphenyl-d14 (Surr)	1.27		mg/kg wet	1.60		79.5	30-125			
LCS (BAJ0530-BS1)				Prepared & Analyzed: 10/18/2017						
1,2,4-Trichlorobenzene	2.17 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	68.0	21.8-66.7			L
1,2-Dichlorobenzene	2.34 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	73.4	22-60			L
1,3-Dichlorobenzene	2.04 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	63.9	22-60			L
1,4-Dichlorobenzene	2.26 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	70.7	13-68			L
1-Chloronaphthalene	2.20 mg/kg wet	0.0833	mg/kg wet		mg/kg wet		0-200			
2,4,6-Trichlorophenol	2.24 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	70.2	50-115			
2,4-Dichlorophenol	2.41 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	75.3	50-105			
2,4-Dimethylphenol	2.42 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	75.8	30-110			
2,4-Dinitrophenol	2.70 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	84.5	15-140			
2,4-Dinitrotoluene	2.37 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	74.1	21-99			
2,6-Dinitrotoluene	3.09 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	96.6	15-140			
2-Chloronaphthalene	2.23 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	69.9	45-105			
2-Chlorophenol	2.17 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	67.9	15-74			
2-Nitrophenol	2.42 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	75.7	40-115			
3,3'-Dichlorobenzidine	1.90 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	59.4	20-110			
4,6-Dinitro-2-methylphenol	2.60 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	81.5	40-130			
4-Bromophenyl phenyl ether	2.38 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	74.5	15-110			
4-Chlorophenyl phenyl ether	2.23 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	69.7	15-110			
4-Nitrophenol	2.14 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	67.1	0-125			
Acenaphthene	2.29 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	71.7	27.7-85.5			
Acenaphthylene	2.41 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	75.3	50-105			
Acetophenone	1.84 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	57.7	0-200			
Anthracene	2.31 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	72.2	55-110			
Benzo (a) anthracene	2.35 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	73.6	55-110			
Benzo (a) pyrene	2.20 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	69.0	55-110			

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0530 - SW3550C										
LCS (BAJ0530-BS1)				Prepared & Analyzed: 10/18/2017						
Benzo (b) fluoranthene	2.22 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	69.6	45-120			
Benzo (g,h,i) perylene	2.04 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	63.9	40-125			
Benzo (k) fluoranthene	2.42 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	75.6	45-125			
bis (2-Chloroethoxy) methane	2.56 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	80.0	40-125			
bis (2-Chloroethyl) ether	2.30 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	72.1	40-125			
2,2'-Oxybis (1-chloropropane)	2.06 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	64.6	40-125			
bis (2-Ethylhexyl) phthalate	1.98 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	61.8	40-125			
Butyl benzyl phthalate	1.91 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	59.8	45-115			
Chrysene	2.22 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	69.5	55-110			
Dibenz (a,h) anthracene	2.02 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	63.3	40-125			
Diethyl phthalate	2.11 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	66.1	40-120			
Dimethyl phthalate	2.10 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	65.8	25-125			
Di-n-butyl phthalate	2.89 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	90.5	55-115			
Di-n-octyl phthalate	2.00 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	62.5	35-135			
Fluoranthene	2.59 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	80.9	55-115			
Fluorene	2.26 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	70.7	50-110			
Hexachlorobenzene	2.48 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	77.7	25-125			
Hexachlorobutadiene	2.47 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	77.3	25-125			
Hexachlorocyclopentadiene	1.84 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	57.5	25-125			
Hexachloroethane	2.26 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	70.8	25-125			
Indeno (1,2,3-cd) pyrene	2.05 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	64.1	45-125			
Isophorone	2.29 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	71.8	10-110			
Naphthalene	2.19 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	68.5	40-100			
Nitrobenzene	2.22 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	69.6	40-100			
n-Nitrosodimethylamine	3.27 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	102	25-110			
n-Nitrosodi-n-propylamine	2.29 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	71.7	12-97			
n-Nitrosodiphenylamine	1.78 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	55.8	12-97			
p-Chloro-m-cresol	2.25 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	70.6	10-91			
Pentachlorophenol	2.32 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	72.6	30-109			
Phenanthrene	2.33 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	73.0	50-115			
Phenol	2.32 mg/kg wet	0.0833	mg/kg wet	3.23	mg/kg wet	71.9	0-115			

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0530 - SW3550C										
LCS (BAJ0530-BS1)				Prepared & Analyzed: 10/18/2017						
Pyrene	1.93 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	60.4	27-110			
Pyridine	2.94 mg/kg wet	0.0833	mg/kg wet	3.19	mg/kg wet	92.0	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	2.71		mg/kg wet	3.19	mg/kg wet	84.8	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1.09		mg/kg wet	1.60	mg/kg wet	68.4	45-105			
Surr: 2-Fluorophenol (Surr)	2.39		mg/kg wet	3.19	mg/kg wet	74.7	35-105			
Surr: Nitrobenzene-d5 (Surr)	1.15		mg/kg wet	1.60	mg/kg wet	72.3	35-100			
Surr: Phenol-d5 (Surr)	2.34		mg/kg wet	3.19	mg/kg wet	73.2	40-100			
Surr: p-Terphenyl-d14 (Surr)	0.994		mg/kg wet	1.60	mg/kg wet	62.2	30-125			
Matrix Spike (BAJ0530-MS1)		**Source: 17J0274-02**		Prepared & Analyzed: 10/18/2017						
1,2,4-Trichlorobenzene	2.45 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	70.8	21.8-66.7			M2
1,2-Dichlorobenzene	2.54 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	73.3	22-60			M2
1,3-Dichlorobenzene	2.23 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	64.4	22-60			M2
1,4-Dichlorobenzene	2.24 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	64.7	22-60			M2
1-Chloronaphthalene	2.52 mg/kg dry	0.173	mg/kg dry		<0.173 mg/kg dry		0-200			
2,4,6-Trichlorophenol	2.54 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	73.5	50-115			
2,4-Dichlorophenol	2.64 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	76.3	50-105			
2,4-Dimethylphenol	2.76 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	79.8	30-110			
2,4-Dinitrophenol	1.87 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	54.1	15-140			
2,4-Dinitrotoluene	2.58 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	74.6	17-111			
2,6-Dinitrotoluene	3.33 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	96.3	15-140			
2-Chloronaphthalene	2.54 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	73.4	45-105			
2-Chlorophenol	1.49 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	43.0	19-64			
2-Nitrophenol	2.60 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	75.1	40-115			
3,3'-Dichlorobenzidine	2.33 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	67.4	20-110			
4,6-Dinitro-2-methylphenol	2.32 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	67.1	40-130			
4-Bromophenyl phenyl ether	2.75 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	79.4	15-110			
4-Chlorophenyl phenyl ether	2.48 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	71.6	15-110			
4-Nitrophenol	2.20 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	63.5	0-125			
Acenaphthene	2.54 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	73.4	24-90			
Acenaphthylene	2.77 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	80.1	50-105			

AIR WATER & SOIL LABORATORIES, INC.

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Final Report

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0530 - SW3550C										
Matrix Spike (BAJ0530-MS1)		**Source: 17J0274-02**		Prepared & Analyzed: 10/18/2017						
Acetophenone	1.94 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	56.0	0-200			
Anthracene	2.62 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	75.7	55-110			
Benzidine	<0.173 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry		0-130			
Benzo (a) anthracene	2.58 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	74.5	55-110			
Benzo (a) pyrene	2.35 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	67.8	55-110			
Benzo (b) fluoranthene	2.88 mg/kg dry	0.173	mg/kg dry	3.46	0.259 mg/kg dry	75.7	45-120			
Benzo (g,h,i) perylene	2.11 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	61.0	40-125			
Benzo (k) fluoranthene	2.32 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	67.2	45-125			
bis (2-Chloroethoxy) methane	2.90 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	83.9	40-125			
bis (2-Chloroethyl) ether	2.53 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	73.1	40-125			
2,2'-Oxybis (1-chloropropane)	2.14 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	62.0	40-125			
bis (2-Ethylhexyl) phthalate	2.27 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	65.7	40-125			
Butyl benzyl phthalate	2.22 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	64.2	45-115			
Chrysene	2.58 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	74.6	55-110			
Dibenz (a,h) anthracene	2.07 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	59.9	40-125			
Diethyl phthalate	2.32 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	67.1	40-120			
Dimethyl phthalate	2.36 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	68.2	25-125			
Di-n-butyl phthalate	2.66 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	77.0	55-115			
Di-n-octyl phthalate	2.50 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	72.3	35-135			
Fluoranthene	3.02 mg/kg dry	0.173	mg/kg dry	3.46	0.181 mg/kg dry	81.9	55-115			
Fluorene	2.54 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	73.5	50-110			
Hexachlorobenzene	2.76 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	79.8	25-125			
Hexachlorobutadiene	2.70 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	78.1	25-125			
Hexachlorocyclopentadiene	1.42 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	41.1	25-125			
Hexachloroethane	2.51 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	72.4	25-125			
Indeno (1,2,3-cd) pyrene	2.15 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	62.2	45-125			
Isophorone	2.58 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	74.7	10-110			
Naphthalene	2.45 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	70.8	40-100			
Nitrobenzene	2.48 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	71.8	40-100			
n-Nitrosodimethylamine	3.73 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	108	25-110			
n-Nitrosodi-n-propylamine	2.58 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	74.5	12-97			

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Final Report

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0530 - SW3550C										
Matrix Spike (BAJ0530-MS1)		**Source: 17J0274-02**		Prepared & Analyzed: 10/18/2017						
n-Nitrosodiphenylamine	2.02 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	58.3	12-97			
p-Chloro-m-cresol	2.46 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	71.1	10-91			
Pentachlorophenol	2.37 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	68.6	27-109			
Phenanthrene	2.67 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	77.1	50-115			
Phenol	2.60 mg/kg dry	0.173	mg/kg dry	3.49	<0.173 mg/kg dry	74.5	0-115			
Pyrene	2.35 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	67.9	23-110			
Pyridine	3.97 mg/kg dry	0.173	mg/kg dry	3.46	<0.173 mg/kg dry	115	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	2.87		mg/kg dry	3.46	mg/kg dry	83.0	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1.20		mg/kg dry	1.73	mg/kg dry	69.6	45-105			
Surr: 2-Fluorophenol (Surr)	2.40		mg/kg dry	3.46	mg/kg dry	69.3	35-105			
Surr: Nitrobenzene-d5 (Surr)	1.20		mg/kg dry	1.73	mg/kg dry	69.5	35-100			
Surr: Phenol-d5 (Surr)	2.44		mg/kg dry	3.46	mg/kg dry	70.4	40-100			
Surr: p-Terphenyl-d14 (Surr)	1.06		mg/kg dry	1.73	mg/kg dry	61.5	30-125			
Matrix Spike Dup (BAJ0530-MSD1)		**Source: 17J0274-02**		Prepared & Analyzed: 10/18/2017						
1,2,4-Trichlorobenzene	2.09 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	62.3	21.8-66.7	15.9	20	
1,2-Dichlorobenzene	2.18 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	65.1	22-60	15.2	20	M2
1,3-Dichlorobenzene	1.93 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	57.6	22-60	14.3	20	
1,4-Dichlorobenzene	2.13 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	63.4	22-60	5.23	20	M2
1-Chloronaphthalene	2.10 mg/kg dry	0.167	mg/kg dry		<0.167 mg/kg dry		0-200	17.9	20	
2,3,4,6-Tetrachlorophenol	<0.167 mg/kg dry	0.167	mg/kg dry		<0.167 mg/kg dry		0-200		20	
2,4,5-Trichlorophenol	2.04 mg/kg dry	0.167	mg/kg dry		<0.167 mg/kg dry		50-110		20	
2,4,6-Trichlorophenol	2.10 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	62.6	50-115	19.3	20	
2,4-Dichlorophenol	2.28 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	68.1	50-105	14.5	20	
2,4-Dimethylphenol	2.38 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	70.9	30-110	15.0	20	
2,4-Dinitrophenol	1.67 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	50.0	15-140	11.2	20	
2,4-Dinitrotoluene	2.19 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	65.2	17-111	16.7	20	
2,6-Dinitrotoluene	2.81 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	83.9	15-140	16.9	20	
2-Chloronaphthalene	2.12 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	63.2	45-105	18.1	20	
2-Chlorophenol	2.09 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	62.4	19-64	33.6	20	P
2-Nitroaniline	<0.167 mg/kg dry	0.167	mg/kg dry		<0.167 mg/kg dry		0-200		20	

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Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0530 - SW3550C										
Matrix Spike Dup (BAJ0530-MSD1)		**Source: 17J0274-02**		Prepared & Analyzed: 10/18/2017						
2-Nitrophenol	2.29 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	68.4	40-115	12.5	20	
3,3'-Dichlorobenzidine	2.07 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	61.7	20-110	12.1	20	
3-Nitroaniline	<0.167 mg/kg dry	0.167	mg/kg dry		<0.167 mg/kg dry		0-200		20	
4,6-Dinitro-2-methylphenol	2.09 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	62.3	40-130	10.7	20	
4-Bromophenyl phenyl ether	2.32 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	69.2	15-110	17.0	20	
4-Chloroaniline	<0.167 mg/kg dry	0.167	mg/kg dry		<0.167 mg/kg dry		15-110		20	
4-Chlorophenyl phenyl ether	2.08 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	62.0	15-110	17.6	20	
4-Nitroaniline	<0.167 mg/kg dry	0.167	mg/kg dry		<0.167 mg/kg dry		0-200		20	
4-Nitrophenol	1.91 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	57.1	0-125	13.8	20	
Acenaphthene	2.14 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	64.0	24-90	16.9	20	
Acenaphthylene	2.32 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	69.3	50-105	17.7	20	
Acetophenone	1.70 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	50.7	0-200	13.0	20	
Anthracene	2.26 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	67.4	55-110	14.8	20	
Benzidine	<0.167 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry		0-130		20	
Benzo (a) anthracene	2.24 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	66.8	55-110	14.0	20	
Benzo (a) pyrene	2.12 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	63.3	55-110	10.1	20	
Benzo (b) fluoranthene	2.57 mg/kg dry	0.167	mg/kg dry	3.35	0.259 mg/kg dry	68.9	45-120	11.3	20	
Benzo (g,h,i) perylene	1.79 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	53.6	40-125	16.1	20	
Benzo (k) fluoranthene	2.75 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	82.0	45-125	16.7	20	
Benzoic acid	0.273 mg/kg dry	0.167	mg/kg dry		<0.167 mg/kg dry		0-125		20	
Benzyl alcohol	<0.167 mg/kg dry	0.167	mg/kg dry		<0.167 mg/kg dry		0-200		20	
bis (2-Chloroethoxy) methane	2.48 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	73.9	40-125	15.8	20	
bis (2-Chloroethyl) ether	2.22 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	66.2	40-125	13.1	20	
2,2'-Oxybis (1-chloropropane)	1.93 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	57.7	40-125	10.3	20	
bis (2-Ethylhexyl) phthalate	2.01 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	60.0	40-125	12.3	20	
Butyl benzyl phthalate	1.93 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	57.6	45-115	14.0	20	
Chrysene	2.20 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	65.6	55-110	15.9	20	
Dibenz (a,h) anthracene	1.70 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	50.8	40-125	19.5	20	
Dibenzofuran	<0.167 mg/kg dry	0.167	mg/kg dry		<0.167 mg/kg dry		0-200		20	
Diethyl phthalate	1.96 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	58.5	40-120	16.9	20	
Dimethyl phthalate	1.98 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	59.2	25-125	17.3	20	

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Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0530 - SW3550C										
Matrix Spike Dup (BAJ0530-MSD1)		**Source: 17J0274-02**		Prepared & Analyzed: 10/18/2017						
Di-n-butyl phthalate	2.25 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	67.1	55-115	16.9	20	
Di-n-octyl phthalate	2.17 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	64.9	35-135	14.0	20	
Fluoranthene	2.64 mg/kg dry	0.167	mg/kg dry	3.35	0.181 mg/kg dry	73.3	55-115	13.4	20	
Fluorene	2.13 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	63.7	50-110	17.5	20	
Hexachlorobenzene	2.35 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	70.0	25-125	16.3	20	
Hexachlorobutadiene	2.34 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	69.8	25-125	14.4	20	
Hexachlorocyclopentadiene	1.24 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	37.0	25-125	13.8	20	
Hexachloroethane	2.13 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	63.6	25-125	16.1	20	
Indeno (1,2,3-cd) pyrene	1.78 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	53.2	45-125	18.8	20	
Isophorone	2.26 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	67.3	10-110	13.5	20	
m+p-Cresols	<0.167 mg/kg dry	0.167	mg/kg dry		<0.167 mg/kg dry		40-105		20	
Naphthalene	2.14 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	63.8	40-100	13.6	20	
Nitrobenzene	2.12 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	63.2	40-100	15.9	20	
n-Nitrosodimethylamine	1.38 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	41.1	25-110	92.1	20	P
n-Nitrosodi-n-propylamine	2.29 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	68.3	12-97	11.8	20	
n-Nitrosodiphenylamine	1.76 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	52.4	12-97	13.8	20	
o-Cresol	<0.167 mg/kg dry	0.167	mg/kg dry		<0.167 mg/kg dry		40-110		20	
p-Chloro-m-cresol	2.13 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	63.5	10-91	14.6	20	
Pentachlorophenol	1.97 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	58.9	27-109	18.4	20	
Phenanthrene	2.34 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	69.8	50-115	13.1	20	
Phenol	2.28 mg/kg dry	0.167	mg/kg dry	3.38	<0.167 mg/kg dry	67.3	0-115	13.3	20	
Pyrene	1.97 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	58.8	23-110	17.6	20	
Pyridine	1.72 mg/kg dry	0.167	mg/kg dry	3.35	<0.167 mg/kg dry	51.3	0-200	79.2	20	P
Surr: 2,4,6-Tribromophenol (Surr)	2.45		mg/kg dry	3.35	mg/kg dry	73.2	35-125			
Surr: 2-Fluorobiphenyl (Surr)	0.976		mg/kg dry	1.68	mg/kg dry	58.2	45-105			
Surr: 2-Fluorophenol (Surr)	1.18		mg/kg dry	3.35	mg/kg dry	35.1	35-105			
Surr: Nitrobenzene-d5 (Surr)	1.04		mg/kg dry	1.68	mg/kg dry	62.0	35-100			
Surr: Phenol-d5 (Surr)	2.16		mg/kg dry	3.35	mg/kg dry	64.4	40-100			
Surr: p-Terphenyl-d14 (Surr)	0.893		mg/kg dry	1.68	mg/kg dry	53.3	30-125			

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Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
Blank (BAJ0458-BLK1)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
PCB as Aroclor 1016	<0.100 mg/kg wet	0.100	mg/kg wet							
4,4'-DDD	<0.00600 mg/kg wet	0.00600	mg/kg wet							
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet							
4,4'-DDE	<0.00400 mg/kg wet	0.00400	mg/kg wet							
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet							
4,4'-DDT	<0.00400 mg/kg wet	0.00400	mg/kg wet							
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1260	<0.100 mg/kg wet	0.100	mg/kg wet							
Aldrin	<0.00200 mg/kg wet	0.00200	mg/kg wet							
alpha-BHC	<0.00200 mg/kg wet	0.00200	mg/kg wet							
beta-BHC	<0.00200 mg/kg wet	0.00200	mg/kg wet							
Chlordane	<0.0420 mg/kg wet	0.0420	mg/kg wet							
delta-BHC	<0.00400 mg/kg wet	0.00400	mg/kg wet							
Dieldrin	<0.00400 mg/kg wet	0.00400	mg/kg wet							
Endosulfan I	<0.00400 mg/kg wet	0.00400	mg/kg wet							
Endosulfan II	<0.00600 mg/kg wet	0.00600	mg/kg wet							
Endosulfan sulfate	<0.00200 mg/kg wet	0.00200	mg/kg wet							
Endrin	<0.00400 mg/kg wet	0.00400	mg/kg wet							
Endrin aldehyde	<0.00800 mg/kg wet	0.00800	mg/kg wet							
Endrin ketone	<0.00200 mg/kg wet	0.00200	mg/kg wet							
gamma-BHC (Lindane)	<0.00200 mg/kg wet	0.00200	mg/kg wet							
Heptachlor	<0.00200 mg/kg wet	0.00200	mg/kg wet							
Heptachlor epoxide	<0.0400 mg/kg wet	0.0400	mg/kg wet							
Methoxychlor	<0.0400 mg/kg wet	0.0400	mg/kg wet							
Mirex	<0.00600 mg/kg wet	0.00600	mg/kg wet							
Toxaphene	<0.0420 mg/kg wet	0.0420	mg/kg wet							
PCBs, Total	<0.900 mg/kg wet	0.900	mg/kg wet							
Surr: DCB	0.0342		mg/kg wet	0.0326		105	30-105			
Surr: TCMX	0.0244		mg/kg wet	0.0326		75.0	30-105			

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Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
Blank (BAJ0458-BLK1)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
Surr: TCMX	0.0244		mg/kg wet	0.0326		75.0	30-105			
Surr: DCB	0.0342		mg/kg wet	0.0326		105	30-105			
LCS (BAJ0458-BS1)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	0.0183 mg/kg wet	0.00600	mg/kg wet	0.0167	mg/kg wet	110	23-134			
4,4'-DDE	0.0167 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	100	23-134			
4,4'-DDT	0.0200 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	120	23-134			
Aldrin	0.0150 mg/kg wet	0.00200	mg/kg wet	0.0167	mg/kg wet	90.0	23-134			
alpha-BHC	0.0167 mg/kg wet	0.00200	mg/kg wet	0.0167	mg/kg wet	100	23-134			
beta-BHC	0.0200 mg/kg wet	0.00200	mg/kg wet	0.0167	mg/kg wet	120	23-134			
delta-BHC	0.0150 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	90.0	23-134			
Dieldrin	0.0167 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Endosulfan I	0.0167 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Endosulfan II	0.0183 mg/kg wet	0.00600	mg/kg wet	0.0167	mg/kg wet	110	23-134			
Endosulfan sulfate	0.0183 mg/kg wet	0.00200	mg/kg wet	0.0167	mg/kg wet	110	23-134			
Endrin	0.0200 mg/kg wet	0.00400	mg/kg wet	0.0167	mg/kg wet	120	23-134			
Endrin aldehyde	0.0167 mg/kg wet	0.00800	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Endrin ketone	0.0200 mg/kg wet	0.00200	mg/kg wet		mg/kg wet		23-134			
gamma-BHC (Lindane)	0.0167 mg/kg wet	0.00200	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Heptachlor	0.0167 mg/kg wet	0.00200	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Heptachlor epoxide	<0.0400 mg/kg wet	0.0400	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Methoxychlor	<0.0400 mg/kg wet	0.0400	mg/kg wet	0.0167	mg/kg wet	120	23-134			
Mirex	0.0167 mg/kg wet	0.00600	mg/kg wet	0.0167	mg/kg wet	100	23-134			
Surr: TCMX	0.0333		mg/kg wet	0.0333	mg/kg wet	100	30-105			
Surr: DCB	0.0350		mg/kg wet	0.0333	mg/kg wet	105	30-105			
LCS (BAJ0458-BS2)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
PCB as Aroclor 1016	0.285 mg/kg wet	0.100	mg/kg wet	0.160	mg/kg wet	178	60-140			L
PCB as Aroclor 1260	0.271 mg/kg wet	0.100	mg/kg wet	0.160	mg/kg wet	169	60-140			L
Surr: DCB	0.0321		mg/kg wet	0.0321	mg/kg wet	100	30-105			
Surr: TCMX	0.0272		mg/kg wet	0.0321	mg/kg wet	85.0	30-105			

AIR WATER & SOIL LABORATORIES, INC.

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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
LCS (BAJ0458-BS3)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
Toxaphene	0.340 mg/kg wet	0.0420	mg/kg wet	0.411	mg/kg wet	82.8	23-134			
LCS (BAJ0458-BS4)				Prepared: 10/16/2017 Analyzed: 10/17/2017						
Chlordane	0.275 mg/kg wet	0.0420	mg/kg wet	0.410	mg/kg wet	67.2	23-134			
Matrix Spike (BAJ0458-MS1)		**Source: 17J0144-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	0.0194 mg/kg dry	0.00636	mg/kg dry	0.0177	<0.00636 mg/kg dry	110	23-134			
4,4'-DDE	0.0177 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	100	23-134			
4,4'-DDT	0.0212 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	120	23-134			
Aldrin	0.0177 mg/kg dry	0.00212	mg/kg dry	0.0177	<0.00212 mg/kg dry	100	23-134			
alpha-BHC	0.0194 mg/kg dry	0.00212	mg/kg dry	0.0177	<0.00212 mg/kg dry	110	23-134			
beta-BHC	0.0212 mg/kg dry	0.00212	mg/kg dry	0.0177	<0.00212 mg/kg dry	120	23-134			
delta-BHC	0.0177 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	100	23-134			
Dieldrin	0.0177 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	100	23-134			
Endosulfan I	0.0177 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	100	23-134			
Endosulfan II	0.0177 mg/kg dry	0.00636	mg/kg dry	0.0177	<0.00636 mg/kg dry	100	23-134			
Endosulfan sulfate	0.0194 mg/kg dry	0.00212	mg/kg dry	0.0177	<0.00212 mg/kg dry	110	23-134			
Endrin	0.0247 mg/kg dry	0.00424	mg/kg dry	0.0177	<0.00424 mg/kg dry	140	23-134			M
Endrin aldehyde	0.0159 mg/kg dry	0.00848	mg/kg dry	0.0177	<0.00848 mg/kg dry	90.0	23-134			
Endrin ketone	0.0194 mg/kg dry	0.00212	mg/kg dry		<0.00212 mg/kg dry		23-134			
gamma-BHC (Lindane)	0.0194 mg/kg dry	0.00212	mg/kg dry	0.0177	<0.00212 mg/kg dry	110	23-134			
Heptachlor	0.0194 mg/kg dry	0.00212	mg/kg dry	0.0177	<0.00212 mg/kg dry	110	23-134			
Heptachlor epoxide	<0.0424 mg/kg dry	0.0424	mg/kg dry	0.0177	<0.0424 mg/kg dry	100	23-134			
Methoxychlor	<0.0424 mg/kg dry	0.0424	mg/kg dry	0.0177	<0.0424 mg/kg dry	130	23-134			
Mirex	0.0177 mg/kg dry	0.00636	mg/kg dry	0.0177	<0.00636 mg/kg dry	100	23-134			
Surr: TCMX	0.0353		mg/kg dry	0.0353	mg/kg dry	100	30-105			
Surr: DCB	0.0336		mg/kg dry	0.0353	mg/kg dry	95.0	30-105			

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Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
Matrix Spike (BAJ0458-MS2)		**Source: 17J0274-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
PCB as Aroclor 1016	0.300 mg/kg dry	0.103	mg/kg dry	0.172	<0.103 mg/kg dry	174	60-140			M
PCB as Aroclor 1260	0.248 mg/kg dry	0.103	mg/kg dry	0.172	<0.103 mg/kg dry	144	60-140			M
Surr: DCB	0.0310		mg/kg dry	0.0345	mg/kg dry	90.0	30-105			
Surr: TCMX	0.0293		mg/kg dry	0.0345	mg/kg dry	85.0	30-105			
Matrix Spike Dup (BAJ0458-MSD1)		**Source: 17J0144-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
4,4'-DDD	0.0208 mg/kg dry	0.00623	mg/kg dry	0.0173	<0.00623 mg/kg dry	120	23-134	6.72	20	
4,4'-DDE	0.0190 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	110	23-134	7.55	20	
4,4'-DDT	0.0190 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	110	23-134	10.7	20	
Aldrin	0.0190 mg/kg dry	0.00208	mg/kg dry	0.0173	<0.00208 mg/kg dry	110	23-134	7.55	20	
alpha-BHC	0.0173 mg/kg dry	0.00208	mg/kg dry	0.0173	<0.00208 mg/kg dry	100	23-134	11.5	20	
beta-BHC	0.0225 mg/kg dry	0.00208	mg/kg dry	0.0173	<0.00208 mg/kg dry	130	23-134	6.02	20	
delta-BHC	0.0173 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	100	23-134	1.98	20	
Dieldrin	0.0190 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	110	23-134	7.55	20	
Endosulfan I	0.0190 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	110	23-134	7.55	20	
Endosulfan II	0.0190 mg/kg dry	0.00623	mg/kg dry	0.0173	<0.00623 mg/kg dry	110	23-134	7.55	20	
Endosulfan sulfate	0.0173 mg/kg dry	0.00208	mg/kg dry	0.0173	<0.00208 mg/kg dry	100	23-134	11.5	20	
Endrin	0.0242 mg/kg dry	0.00416	mg/kg dry	0.0173	<0.00416 mg/kg dry	140	23-134	1.98	20	M
Endrin aldehyde	0.0156 mg/kg dry	0.00831	mg/kg dry	0.0173	<0.00831 mg/kg dry	90.0	23-134	1.98	20	
Endrin ketone	0.0208 mg/kg dry	0.00208	mg/kg dry		<0.00208 mg/kg dry		23-134	6.72	20	
gamma-BHC (Lindane)	0.0190 mg/kg dry	0.00208	mg/kg dry	0.0173	<0.00208 mg/kg dry	110	23-134	1.98	20	
Heptachlor	0.0190 mg/kg dry	0.00208	mg/kg dry	0.0173	<0.00208 mg/kg dry	110	23-134	1.98	20	
Heptachlor epoxide	<0.0416 mg/kg dry	0.0416	mg/kg dry	0.0173	<0.0416 mg/kg dry	110	23-134	7.55	20	
Methoxychlor	<0.0416 mg/kg dry	0.0416	mg/kg dry	0.0173	<0.0416 mg/kg dry	120	23-134	9.98	20	
Mirex	0.0173 mg/kg dry	0.00623	mg/kg dry	0.0173	<0.00623 mg/kg dry	100	23-134	1.98	20	
Surr: TCMX	0.0364		mg/kg dry	0.0346	mg/kg dry	105	30-105			
Surr: DCB	0.0346		mg/kg dry	0.0346	mg/kg dry	100	30-105			

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Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0458 - SW3550B										
Matrix Spike Dup (BAJ0458-MSD2)		**Source: 17J0274-02**		Prepared: 10/16/2017 Analyzed: 10/17/2017						
PCB as Aroclor 1016	0.316 mg/kg dry	0.106	mg/kg dry	0.176	<0.106 mg/kg dry	179	60-140	5.13	20	M
PCB as Aroclor 1260	0.282 mg/kg dry	0.106	mg/kg dry	0.176	<0.106 mg/kg dry	160	60-140	12.8	20	M
Surr: DCB	0.0300		mg/kg dry	0.0353	mg/kg dry	85.0	30-105			
Surr: TCMX	0.0282		mg/kg dry	0.0353	mg/kg dry	80.0	30-105			

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Wet Chemistry Analysis - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0235 - No Prep Wet Chem										
Blank (BAJ0235-BLK1)				Prepared & Analyzed: 10/09/2017						
Percent Solids	100 %	0.10	%							
Duplicate (BAJ0235-DUP1)		**Source: 17J0229-02**		Prepared & Analyzed: 10/09/2017						
Percent Solids	94.2 %	0.10	%		94.0 %			0.231	20	
Duplicate (BAJ0235-DUP2)		**Source: 17J0274-04**		Prepared & Analyzed: 10/09/2017						
Percent Solids	94.1 %	0.10	%		94.2 %			0.107	20	
Batch BAJ0593 - No Prep Wet Chem										
Blank (BAJ0593-BLK1)				Prepared & Analyzed: 10/19/2017						
Cyanide	<0.01 mg/kg wet	0.01	mg/kg wet							
LCS (BAJ0593-BS1)				Prepared & Analyzed: 10/19/2017						
Cyanide	0.22 mg/L	0.01	mg/L	0.250 mg/L		87.8	80-120			
LCS Dup (BAJ0593-BSD1)				Prepared & Analyzed: 10/19/2017						
Cyanide	0.23 mg/L	0.01	mg/L	0.250 mg/L		90.4	80-120	2.96	20	
Matrix Spike (BAJ0593-MS1)		**Source: 17J0274-04**		Prepared & Analyzed: 10/19/2017						
Cyanide	19.9 mg/kg dry	0.97	mg/kg dry	24.3	<0.97 mg/kg dry	82.1	75-125			
Matrix Spike Dup (BAJ0593-MSD1)		**Source: 17J0274-04**		Prepared & Analyzed: 10/19/2017						
Cyanide	21.5 mg/kg dry	0.97	mg/kg dry	24.3	<0.97 mg/kg dry	88.6	75-125	7.69	20	

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Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Solids	
Antimony	VELAP
Arsenic	VELAP
Barium	VELAP,WVDEP
Beryllium	VELAP
Cadmium	VELAP,WVDEP
Chromium	VELAP
Cobalt	VELAP
Copper	VELAP
Iron	VELAP
Lead	VELAP,WVDEP
Nickel	VELAP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Thallium	VELAP
Vanadium	VELAP
Zinc	VELAP
SW7471B in Solids	
Mercury	VELAP,WVDEP
SW8081B in Solids	
alpha-BHC	NC,VELAP
beta-BHC	NC,VELAP
Chlordane	NC,VELAP
delta-BHC	NC,VELAP
Dieldrin	NC,VELAP
Endosulfan I	NC,VELAP
Endosulfan II	NC,VELAP
Endosulfan sulfate	NC,VELAP
Endrin	NC,VELAP
Endrin aldehyde	NC,VELAP
Endrin ketone	NC,VELAP
gamma-BHC (Lindane)	NC,VELAP
Heptachlor	NC,VELAP
Heptachlor epoxide	NC,VELAP
Methoxychlor	NC,VELAP
Mirex	NC,VELAP
Toxaphene	NC,VELAP

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	11/3/2017 9:21
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Certified Analyses included in this Report

Analyte	Certifications
SW8082A in Solids	
PCB as Aroclor 1016	VELAP,NC
PCB as Aroclor 1221	VELAP,NC
PCB as Aroclor 1232	VELAP,NC
PCB as Aroclor 1242	VELAP,NC
PCB as Aroclor 1248	VELAP,NC
PCB as Aroclor 1254	VELAP,NC
PCB as Aroclor 1260	VELAP,NC
SW8270D in Solids	
1,2,4,5-Tetrachlorobenzene	NC,VELAP,WVDEP
1,2,4-Trichlorobenzene	NC,VELAP,WVDEP
1,2-Dichlorobenzene	NC,VELAP,WVDEP
1,2-Diphenylhydrazine	NC,VELAP,WVDEP
1,3-Dichlorobenzene	NC,VELAP,WVDEP
1,4-Dichlorobenzene	NC,VELAP,WVDEP
1-Chloronaphthalene	NC,VELAP,WVDEP
1-Naphthylamine	NC,VELAP,WVDEP
2,3,4,6-Tetrachlorophenol	NC,VELAP,WVDEP
2,4,5-Trichlorophenol	NC,VELAP,WVDEP
2,4,6-Trichlorophenol	NC,VELAP,WVDEP
2,4-Dichlorophenol	NC,VELAP,WVDEP
2,4-Dimethylphenol	NC,VELAP,WVDEP
2,4-Dinitrophenol	NC,VELAP,WVDEP
2,4-Dinitrotoluene	NC,VELAP,WVDEP
2,6-Dichlorophenol	NC,VELAP,WVDEP
2,6-Dinitrotoluene	NC,VELAP,WVDEP
2-Chloronaphthalene	NC,VELAP,WVDEP
2-Chlorophenol	NC,VELAP,WVDEP
2-Methylnaphthalene	NC,VELAP,WVDEP
2-Naphthylamine	NC,VELAP,WVDEP
2-Nitroaniline	NC,VELAP,WVDEP
2-Nitrophenol	NC,VELAP,WVDEP
3-Methylcholanthrene	NC,VELAP,WVDEP
3-Nitroaniline	NC,VELAP,WVDEP
4,6-Dinitro-2-methylphenol	NC,VELAP,WVDEP
4-Aminobiphenyl	NC,VELAP,WVDEP
4-Bromophenyl phenyl ether	NC,VELAP,WVDEP

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Certified Analyses included in this Report

Analyte	Certifications
4-Chloroaniline	NC,VELAP,WVDEP
4-Chlorophenyl phenyl ether	NC,VELAP,WVDEP
4-Nitroaniline	NC,VELAP,WVDEP
4-Nitrophenol	NC,VELAP,WVDEP
7,12-Dimethylbenz (a) anthracene	NC,VELAP,WVDEP
Acenaphthene	NC,VELAP,WVDEP
Acenaphthylene	NC,VELAP,WVDEP
Acetophenone	NC,VELAP,WVDEP
Aniline	NC,VELAP,WVDEP
Anthracene	NC,VELAP,WVDEP
Benzidine	NC,VELAP,WVDEP
Benzo (a) anthracene	NC,VELAP,WVDEP
Benzo (a) pyrene	NC,VELAP,WVDEP
Benzo (b) fluoranthene	NC,VELAP,WVDEP
Benzo (g,h,i) perylene	NC,VELAP,WVDEP
Benzo (k) fluoranthene	NC,VELAP,WVDEP
Benzoic acid	NC,VELAP,WVDEP
Benzyl alcohol	NC,VELAP,WVDEP
bis (2-Chloroethoxy) methane	NC,VELAP,WVDEP
bis (2-Chloroethyl) ether	NC,VELAP,WVDEP
2,2'-Oxybis (1-chloropropane)	NC,VELAP,WVDEP
bis (2-Ethylhexyl) phthalate	NC,VELAP,WVDEP
Butyl benzyl phthalate	NC,VELAP,WVDEP
Chrysene	NC,VELAP,WVDEP
Dibenz (a,h) anthracene	NC,VELAP,WVDEP
Dibenz (a,j) acridine	NC,VELAP,WVDEP
Dibenzofuran	NC,VELAP,WVDEP
Diethyl phthalate	NC,VELAP,WVDEP
Dimethyl phthalate	NC,VELAP,WVDEP
Di-n-butyl phthalate	NC,VELAP,WVDEP
Di-n-octyl phthalate	NC,VELAP,WVDEP
Diphenylamine	NC,VELAP,WVDEP
Ethyl methanesulfonate	NC,VELAP,WVDEP
Fluoranthene	NC,VELAP,WVDEP
Fluorene	NC,VELAP,WVDEP
Hexachlorobenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Hexachlorocyclopentadiene	NC,VELAP,WVDEP

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Certified Analyses included in this Report

Analyte	Certifications
Hexachloroethane	NC,VELAP,WVDEP
Indeno (1,2,3-cd) pyrene	NC,VELAP,WVDEP
Isophorone	NC,VELAP,WVDEP
m+p-Cresols	NC,VELAP,WVDEP
Methyl methanesulfonate	NC,VELAP,WVDEP
Naphthalene	NC,VELAP,WVDEP
Nitrobenzene	NC,VELAP,WVDEP
n-Nitrosodimethylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-butylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-propylamine	NC,VELAP,WVDEP
n-Nitrosodiphenylamine	NC,VELAP,WVDEP
n-Nitrosopiperidine	NC,VELAP,WVDEP
o+m+p-Cresols	NC,VELAP,WVDEP
o-Cresol	NC,VELAP,WVDEP
p-(Dimethylamino) azobenzene	NC,VELAP,WVDEP
p-Chloro-m-cresol	NC,VELAP,WVDEP
Pentachloronitrobenzene (quintozene)	NC,WVDEP
Pentachlorophenol	NC,VELAP,WVDEP
Phenacetin	NC,VELAP,WVDEP
Phenanthrene	NC,VELAP,WVDEP
Phenol	NC,VELAP,WVDEP
Pronamide	NC,VELAP,WVDEP
Pyrene	NC,VELAP,WVDEP
Pyridine	NC,VELAP,WVDEP
SW9012B in Solids	
Cyanide	VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2017
NC	North Carolina DENR	495	12/31/2017
PADEP	NELAC-Pennsylvania	001	10/31/2017
VELAP	NELAC-Virginia Certificate #9439	460021	06/14/2018
WVDEP	West Virginia DEP	350	11/30/2017

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Summary of Data Qualifiers

C	Continuing calibarion verification response for this analyte is outside specifications.
DS	Surrogate concentration reflects a dilution factor.
E	Estimated concentration, outside calibration range
L	LCS recovery is outside of established acceptance limits
M	Matrix spike recovery is outside established acceptance limits
M2	Sample was diluted due to matrix interference.
P	Duplicate analysis does not meet the acceptance criteria for precision
RPD	Relative Percent Difference
Qual	Qualifers
-RE	Denotes sample was re-analyzed
D.F.	Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
PCBs, Total	Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

CLIENT:	LIESFELD FARMS	CONSULTANT:	DRAPER ADEN ASSOCIATES	COPY COA TO CONSULTANT?	YES
ATTN:	THOMAS LIESFELD	ATTN:	WILLIAM A SALOMONE (WSALOMONE@DAA.COM)	COPY INVOICE TO CONSULTANT?	YES
STREET:	859 BEN HATCHER ROAD	STREET:	8090 VILLA PARK DRIVE	PROJECT:	NKWP / WEANACK LAND RECLAMATION CRITERIA
CITY:	WAYNESBORO, GA 30830	CITY:	RICHMOND, VIRGINIA 23228	LOCATION:	NEW KENT, VIRGINIA
PHONE:	804-833-4286	PHONE:	804-264-2228	LABORATORY:	AIR, WATER, & SOIL LABORATORIES
TURN AROUND:	STANDARD	P.O. #:	R15434R-12		

ANALYSES REQUESTED

LAB USE ONLY	SAMPLE INFORMATION			COMPOSITE	NO. OF JARS	MATRIX	see attached table (exclusion criteria column only) E mail						COMMENTS (SAMPLING INTERVAL)
LAB ID	SAMPLE ID	DATE	TIME										
	EA-2-12	10/6	1145	X	3	S	X	1-12					1-12 INCHES
	EA-2 24		1145	X	3	S	X	12-24					12-24 INCHES
	EA-2-12		1600	X	3	S	X	1-12					
	EA-2-24		1600	X	3	S	X	12-24					PLEASE HOLD TCLP SOILS PENDING ANALYSIS ON FIRST RUN

SAMPLED BY: Bradley Fitzwater

PRINTED NAME: Bradley Fitzwater

NOTES: Level 2 data package.
Please report all concentrations in mg/kg (dry weight).
All dry weight analyses shall be total analysis.

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME	REASON FOR TRANSPORT
Bradley Fitzwater	10/6/17	17:20	[illegible]	10/6/17	17:20	TO LABORATORY OF CHEMICAL ANALYSIS

TEMP: 1.3°C Sealed On Ice

pH:

CONTENTS: A = AIR; S=SOIL; G=GROUNDWATER; WW=WASTEWATER

Draper Aden Associates
Engineering • Surveying • Environmental Services
8090 Villa Park Drive
Richmond, Virginia 23228
(804) 264-2228 • Fax (804) 264-8773
www.daa.com

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Thomas Liesfeld 17J0274
Weanack Dredge Material Screenin
Recd: 10/06/2017 Due: 10/20/2017
v130325002

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
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Sample Conditions Checklist

Samples Received at:	**1.30°C**
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments

As per William Salomone the samples on lines 3 and 4 are to have the sample IDs of "EA-4-12" and "EA-4-24" respectively.

BAR 10/09/17 1126

PART I

A. MONITORING REQUIREMENTS

During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to manage dredge spoils as specified below:

1. Dredge material may be disposed at the Weanack Land Reclamation Project if testing indicates that parameter concentrations are equal to or less than the Exclusion Criteria in the following table. Dredge material may additionally be characterized as "Clean Fill" if parameter concentrations are equal to or less than the Clean Fill criteria in the following table – also see Part I.B.9.

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
Metals					
All dry weight analyses shall be total analysis. Elutriate analyses shall be total recoverable metal unless otherwise noted.					
7440-36-0	Antimony	410	14	5.6 Dissolved	
7440-38-2	Arsenic	41	20	10 Dissolved	
7440-39-3	Barium, Total Recoverable	19,000	700	1,000	
7440-41-7	Beryllium, Total Recoverable	2,000	160		
7440-43-9	Cadmium, Total Recoverable	810	4.98	0.4	
7440-47-3	Chromium, Total Recoverable	1,200	111	50	
16065-83-1	Chromium III, Dissolved			180 Dissolved	
18540-29-9	Chromium VI, Dissolved			16 Dissolved	
7440-48-4	Cobalt, Total Recoverable	300			
7440-50-8	Copper	4,300	149	3.6 Dissolved	
7439-89-6	Iron, Total Recoverable	150,000	150,000	300	
7439-92-1	Lead	800	128	15 Dissolved	
7439-96-5	Manganese, Total Recoverable			50	
7439-97-6	Mercury, Total Recoverable	100	1.06	0.05	1.0
7440-02-0	Nickel	1,000	48.6	56 Dissolved	

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
7782-49-2	Selenium, Total Recoverable	5,100	63	10	
7440-22-4	Silver, Total Recoverable	5,100	110	None	0.20
7440-23-5	Sodium			270,000	
7440-28-0	Thallium	5	1	0.24 Dissolved	1.0
7440-62-2	Vanadium, Total Recoverable	5,200	370		
7440-66-6	Zinc	7,500	459	36 Dissolved	
PCBs					
12674-11-2	Aroclor 1016	21			
11104-28-2	Aroclor 1221	0.62			
11141-16-5	Aroclor 1232	0.62			
53469-21-9	Aroclor 1242	0.74			
12672-29-6	Aroclor 1248	0.74			
11097-69-1	Aroclor 1254	0.74			
11096-82-5	Aroclor 1260	0.74			
1336-36-3	Total PCBs, sum of above 7 Aroclors	25.2	0.49		
1336-36-3	Total PCBs, all congeners		0.676	0.00064	
Pesticides					
309-00-2	Aldrin	0.11	0.04	0.00049	0.05
57-74-9	Chlordane		0.0176	0.008	0.2
2921-88-2	Chloropyrifos			0.083	0.2
72-54-8	DDD	7.2	0.028	0.0031	0.1
72-55-9	DDE	5.1	0.0313	0.0022	0.1
50-29-3	DDT	7	0.0629	0.001	0.1
333-41-5	Diazinon			0.17	
60-57-1	Dieldrin	0.11	0.042	0.00052	0.1
115-29-7	Endosulfan	3,700			
959-98-8	Alpha-Endosulfan			0.22	
33213-65-9	Beta-Endosulfan			0.22	

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
1031-07-8	Endosulfan Sulfate			62	
72-20-8	Endrin	180	0.207	0.004	0.1
7421-93-4	Endrin Aldehyde			0.29	
76-44-8	Heptachlor	0.38	0.15	0.00079	0.05
1024-57-3	Heptachlor Epoxide	0.19	0.016	0.00039	0.05
319-84-6	Hexachlorocyclohexane Alpha-BHC			0.026	0.05
319-85-7	Hexachlorocyclohexane Beta-BHC			0.091	
58-89-9	Hexachlorocyclohexane Gamma-BHC (Lindane)	0.52	0.00499	0.01	0.05
143-50-0	Kepone			None	5
72-43-5	Methoxychlor	3,100	280	0.03	0.05
2385-85-5	Mirex			None	0.05
56-38-2	Parathion			0.065	1
8001-35-2	Toxaphene	1.6	0.1	None	5.0
Base Neutral Extractables					
83-32-9	Acenaphthene	33,000	3,400	670	
120-12-7	Anthracene	170,000	0.845	8,300	
92-87-5	Benzidine			0.00086	5
56-55-3	Benzo(a)anthracene	2.1	0.9	0.038	10.0
205-99-2	Benzo(b)fluoranthene	2.1	0.9	0.038	10.0
207-08-9	Benzo(k)fluoranthene	21	0.9	0.038	10.0
50-32-8	Benzo(a)pyrene	0.66	0.21	0.038	10.0
111-91-1	Bis-2-Chloroethoxy Methane	1,800			
111-44-4	Bis-2-Chloroethyl Ether	0.9	0.66	0.30	5
108-60-1	Bis-2-Chloroisopropyl Ether (2,2'-oxybis(1-Chloropropane))	2,300	2,300	1,400	
117-81-7	Bis-2-Ethylhexyl Phthalate	120	49	12	
85-68-7	Butyl Benzyl Phthalate	1,100	910	1,500	
106-47-8	4-Chloroaniline	230	230		

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
91-58-7	2-Chloronaphthalene			1,000	
218-01-9	Chrysene	210	1.29	0.0038	10.0
53-70-3	Dibenz(a,h)anthracene	0.66	0.21	0.038	20.0
84-74-2	Dibutyl Phthalate (Di-n-Butyl Phthalate)	5,700	5,700	2,000	
95-50-1	1,2-Dichlorobenzene	10,000	5,100	420	
541-73-1	1,3-Dichlorobenzene	5,100	5,100	320	
106-46-7	1,4-Dichlorobenzene	570	13	63	
91-94-1	3,3-Dichlorobenzidine	3.8	2	0.21	5
84-66-2	Diethyl Phthalate	490,000	10,000	17,000	
131-11-3	Dimethyl Phthalate	10,000	10,000	270,000	
117-84-0	Di-n-Octyl Phthalate	1,100	1,100		
121-14-2	2,4-Dinitrotoluene	1,200		1.1	10.0
606-20-2	2,6-Dinitrotoluene	620	61		
122-66-7	1,2-Diphenylhydrazine			0.36	5
206-44-0	Fluoranthene	22,000	2.23	130	
86-73-7	Fluorene	22,000	0.536	1,100	
118-74-1	Hexachlorobenzene	1.1	0.66	0.0028	5
87-68-3	Hexachlorobutadiene	22	1	4.4	5
77-47-4	Hexachlorocyclopentadiene	3,700	400	40	
67-72-1	Hexachloroethane	120	6	14	
193-39-5	Indeno(1,2,3-cd)pyrene	2.1	0.9	0.038	20.0
78-59-1	Isophorone	1,800	1,100	350	
91-57-6	2-Methylnaphthalene	4,100			
91-20-3	Naphthalene	230	0.561		
99-09-2	3-Nitroaniline	82			
100-01-6	4-Nitroaniline	82			
98-95-3	Nitrobenzene	280	28	17	
62-75-9	N-Nitrosodimethylamine			0.0069	5

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
621-64-7	N-Nitrosodi-n-propylamine	0.66	0.25	0.05	5
86-30-6	N-Nitrosodiphenylamine	350	140	33	
85-01-8	Phenanthrene		1.17		
120-00-0	Pyrene	17,000	1.52	830	
120-82-1	1,2,4-Trichlorobenzene	400	68	35	
Volatiles					
107-02-8	Acrolein			6.1	50
107-13-1	Acrylonitrile			0.51	50
71-43-2	Benzene			22	
75-25-2	Bromoform			43	
56-23-5	Carbon Tetrachloride			2.3	10.0
108-90-7	Chlorobenzene (Monochlorobenzene)			130	
124-48-1	Chlorodibromomethane			4.0	10.0
67-66-3	Chloroform			340	
75-09-2	Dichloromethane (Methylene Chloride)			46	
75-27-4	Dichlorobromomethane			5.5	10.0
107-06-2	1,2-Dichloroethane			3.8	10.0
75-35-4	1,1-Dichloroethylene			330	
156-60-5	1,2-trans-Dichloroethylene			140	
78-87-5	1,2-Dichloropropane			5.0	5
542-75-6	1,3-Dichloropropene			3.4	5
100-41-4	Ethylbenzene			530	
74-83-9	Methyl Bromide (Bromomethane)			47	
79-34-5	1,1,2,2-Tetrachloroethane			1.7	5
127-18-4	Tetrachloroethylene			6.9	10.0
10-88-3	Toluene			510	
79-00-5	1,1,2-Trichloroethane			5.9	
79-01-6	Trichloroethylene			25	

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
75-01-4	Vinyl Chloride			0.25	10.0
Acid Extractables					
59-50-7	4-Chloro-3-Methylphenol	10,000	10,000		
95-57-8	2-Chlorophenol	5,100	280	81	
120-83-2	2,4-Dichlorophenol	1,800	170	77	
105-67-9	2,4-Dimethylphenol	12,000	1,100	380	
51-28-5	2,4-Dinitrophenol	1,200	110	69	
534-52-1	2-Methyl-4,6-Dinitrophenol			13	
95-48-7	2-Methylphenol	2,800	2,800		
106-44-5	4-Methylphenol	2,800	2,800		
25154-52-3	Nonylphenol			28	
87-86-5	Pentachlorophenol	9	6	2.7	50.0
108-95-2	Phenol	180,000	10,000	10,000	
95-95-4	2,4,5-Trichlorophenol	62,000	5,600		
88-06-2	2,4,6-Trichlorophenol	160	62	14	
Miscellaneous					
776-41-7	Ammonia as NH_3-N			25	200
16887-00-6	Chloride			50,000	
57-12-5	Cyanide, Free			22	
57-12-5	Cyanide, Total	20,000	1,100	5	
94-75-7	2,4-Dichlorophenoxy Acetic Acid (2,4-D)			100	
1746-01-6	Dioxin (2,3,7,8-Tetrachlorodibenzo-p-dioxin)	18 ng/kg	4.3 ng/kg	0.00000005	0.00001
16984-48-8	Fluoride			1,400	
14797-55-8	Nitrate (as N)			5,000	
14797-65-0	Nitrite (as N)			25	
NA	Total Organic Carbon		≤5%	10,000	
NA	Total Petroleum Hydrocarbons			1,000	

SOURCE MONITORING					
CASRN	Parameter	Exclusion Criteria mg/kg* dry weight	Clean Fill Criteria		
			Clean Upland Fill Criteria, mg/kg* dry weight	Elutriate Criteria, µg/L*	
				Criteria	Maximum QL**
NA	Total Phenols (phenolic compounds)			1	4
130498-29-2	PAHs Total		22.8		
14808-79-8	Sulfate			50,0000	
60-10-5	Tributylin			0.46	
93-72-1	2-(2,4,5-Trichlorophenoxy) Propionic Acid (Silvex)			10	

* Unless units are otherwise noted

** Maximum Quantification Level where needed to demonstrate compliance. The screening criterion is achieved if the pollutant is not detected at the indicated quantification level.

2. Dredged material to be disposed at the Weanack Land Reclamation Project shall be characterized by composite sampling. The sampling and compositing protocols and the sample results shall be submitted to the Virginia Department of Environmental Quality for review and approval prior to disposal. The source of the dredged material and the volume of material to be disposed at Weanack shall also be submitted.

   Elutriate testing shall utilize the standard elutriate test protocol as described in the U. S. Army Corps of Engineers publication titled "Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual – Inland Testing Manual", February 1998 (EPA-823-B-98-004) except that deionized water shall be used for sample preparation. Alternative testing methods may be used after approval by the staff of the Virginia Department of Environmental Quality.

CFA | Cape Fear Analytical LLC
an affiliate of The GEL Group INC

3306 Kitty Hawk Road, Suite 120 Wilmington, NC 28405
P 910.795.0421
www.capefearanalytical.com

October 31, 2017

Ms. Jennifer Sult
Air Water & Soil
1941 Reymet Road
Richmond, Virginia 23237

Re: Dioxin & HRMS PCB's subcontract
Work Order: 11473
SDG: 17J0274

Dear Ms. Sult:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 10, 2017. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at 910-795-0421.

Sincerely,

Cynde Larkins

Cynde Larkins
Project Manager

Purchase Order: 813
Enclosures

AIR WATER & SOIL LABORATORIES, INC.

Cape Fear Analytical

1941 REYMET ROAD
RICHMOND, VIRGINIA 23237
(804) 358-8295 PHONE
(804)358-8297 FAX

Chain of Custody
Form #: F1331
Rev. 2.0
Effective: Jun 28, 2016

CHAIN OF CUSTODY

CFA WO# 11473

COMPANY NAME: Air, Water, & Soil Laboratories	INVOICE TO: Same	PROJECT NAME/Quote #: 17J0274
CONTACT: Katrina Cooke	INVOICE CONTACT: Jennifer Sult	SITE NAME:
ADDRESS: 1941 Reymet Road Richmond, VA 23237	INVOICE ADDRESS:	PROJECT NUMBER:
PHONE #: 804-358-8295	INVOICE PHONE #:	P.O. #: 813
FAX #:	EMAIL: Support@awslabs.com	Pretreatment Program:
Is sample for compliance reporting? YES NO	Is sample from a chlorinated supply? YES NO	PWS I.D. #:
SAMPLER NAME (PRINT):	SAMPLER SIGNATURE:	**Due Date:**

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other_____

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE) 2,3,7,8,TCDD Only EPA 1613							
1) 17J0274-01 EA-2-12		X				10/6/2017	11:45		S		X							
2) 17J0274-02 EA-2-24		X				10/6/2017	11:45		S		X							
3) 17J0274-03 EA-4-12		X				10/6/2017	16:00		S		X							
4) 17J0274-04 EA-4-24		X				10/6/2017	16:00		S		X							
5)																		
6)																		
7)																		
8)																		
9)																		
10)																		

COMMENTS

Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol

PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)

Due 10/31/2017

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
[signature]	10/09/17 1700	UPS	
UPS		Cynde Jenkins	10/10/17 1207

QC Data Package
Level III ☐
Level IV ☐

LAB USE ONLY

COOLER TEMP 4.2 °C

Subcontra

SAMPLE RECEIPT CHECKLIST

Cape Fear Analytical

Client: AWSL	Work Order: 11473
Shipping Company: UPS	Date/Time Received: 10 OCT 17 1207

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?			✓
Samples identified as Foreign Soil?			✓

DOE Site Sample Packages	Yes	NA	No*
Screened <0.5 mR/hr?		✓	
Samples < 2x background?		✓	

* Notify RSO of any responses in this column immediately.

Air Sample Receipt Specifics	Yes	NA	No
Air sample in shipment?			✓

Air Witness: _____

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other(describe)
2	Chain of Custody documents included with shipment?	✓			
3	Samples requiring cold preservation within 0-6°C?	✓			Preservation Method: ice bags blue ice dry ice none other (describe) 4.0° +0.2=4.2°C
4	Aqueous samples found to have visible solids?		✓		Sample IDs, containers affected:
5	Samples requiring chemical preservation at proper pH?		✓		Sample IDs, containers affected and pH observed: If preservative added, Lot#:
6	Samples requiring preservation have no residual chlorine?		✓		Sample IDs, containers affected: If preservative added, Lot#:
7	Samples received within holding time?	✓			Sample IDs, tests affected:
8	Sample IDs on COC match IDs on containers?	✓			Sample IDs, containers affected:
9	Date & time of COC match date & time on containers?	✓			Sample IDs, containers affected:
10	Number of containers received match number indicated on COC?	✓			List type and number of containers / Sample IDs, containers affected: 1 - 8 oz clear soil jar per sample
11	COC form is properly signed in relinquished/received sections?	✓			

Comments:

Checklist performed by: Initials: CL Date: 10OCT17

CF-UD-F-7

High Resolution Dioxins and Furans Analysis

Case Narrative

HDOX Case Narrative
Air Water & Soil (AWSL)
SDG 17J0274
Work Order 11473

Method/Analysis Information

Product:	**TCDD Only by EPA Method 1613B in Solids**
Analytical Method:	EPA Method 1613B
Extraction Method:	SW846 3540C
Analytical Batch Number:	35993
Clean Up Batch Number:	35992
Extraction Batch Number:	35991

Sample Analysis

The following samples were analyzed using the analytical protocol as established in Method 1613B:

Sample ID	Client ID
11473001	17J0274-01 EA-2-12
11473002	17J0274-02 EA-2-24
11473003	17J0274-03 EA-4-12
11473004	17J0274-04 EA-4-24
12019847	Method Blank (MB)
12019848	Laboratory Control Sample (LCS)
12019849	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-002 REV# 14.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements
All associated calibration verification standard(s) (CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement
The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries
All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery
The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement
The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation
A matrix spike and matrix spike duplicate analysis was not required for this SDG.

Technical Information

Holding Time Specifications
CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Nonconformance (NCR) Documentation
A NCR was not required for this SDG.

Manual Integrations
Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction. Manual integrations were required for data files in this SDG.

Sample preparation
No difficulties were encountered during sample preparation.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted: Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Certificate of Analysis Report
for

AWSL001 Air Water & Soil

Client SDG: 17J0274 CFA Work Order: 11473

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

K Estimated Maximum Possible Concentration

U Analyte was analyzed for, but not detected above the specified detection limit.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature: Heather Patterson **Name: Heather Patterson**

Date: 31 OCT 2017 **Title: Group Leader**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0274**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**11473001**	**Date Collected:**	**10/06/2017 11:45**	**Matrix:**	**SOIL**
Client Sample:	**1613 TCDD Soil**	**Date Received:**	**10/10/2017 12:07**	**%Moisture:**	**6.3**
Client ID:	**17J0274-01 EA-2-12**			**Prep Basis:**	**Dry Weight**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 13:51**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-10**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10.7 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD		1.32	pg/g	0.997

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		160	199	pg/g	80.4	(37%-137%)
37Cl-2,3,7,8-TCDD		15.8	19.9	pg/g	79.4	(42%-164%)

Comments:

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0274**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**11473002**	**Date Collected:**	**10/06/2017 11:45**	**Matrix:**	**SOIL**
Client Sample:	**1613 TCDD Soil**	**Date Received:**	**10/10/2017 12:07**	**%Moisture:**	**6.1**
Client ID:	**17J0274-02 EA-2-24**			**Prep Basis:**	**Dry Weight**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 14:38**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-11**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10.64 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD	U	1	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		168	200	pg/g	84.0	(37%-137%)
37Cl-2,3,7,8-TCDD		17.4	20.0	pg/g	86.9	(42%-164%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0274**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**11473003**	**Date Collected:**	**10/06/2017 16:00**	**Matrix:**	**SOIL**
Client Sample:	**1613 TCDD Soil**	**Date Received:**	**10/10/2017 12:07**	**%Moisture:**	**5.6**
Client ID:	**17J0274-03 EA-4-12**			**Prep Basis:**	**Dry Weight**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 15:25**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-12**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10.67 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD		3.32	pg/g	0.993

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		161	199	pg/g	81.2	(37%-137%)
37Cl-2,3,7,8-TCDD		16.1	19.9	pg/g	80.9	(42%-164%)

Comments:

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0274**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**11473004**	**Date Collected:**	**10/06/2017 16:00**	**Matrix:**	**SOIL**
Client Sample:	**1613 TCDD Soil**	**Date Received:**	**10/10/2017 12:07**	**%Moisture:**	**5.8**
Client ID:	**17J0274-04 EA-4-24**			**Prep Basis:**	**Dry Weight**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 16:12**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-13**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10.62 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD	U	1	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		162	200	pg/g	81.2	(37%-137%)
37Cl-2,3,7,8-TCDD		16.1	20.0	pg/g	80.6	(42%-164%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Quality Control Summary

Hi-Res Dioxins/Furans
Surrogate Recovery Report

SDG Number: 17J0274

Matrix Type: SOLID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12019848	LCS for batch 35991	13C-2,3,7,8-TCDD		80.3	(20%-175%)
		37Cl-2,3,7,8-TCDD		89.8	(31%-191%)
12019849	LCSD for batch 35991	13C-2,3,7,8-TCDD		73.5	(20%-175%)
		37Cl-2,3,7,8-TCDD		84.0	(31%-191%)
12019847	MB for batch 35991	13C-2,3,7,8-TCDD		74.8	(25%-164%)
		37Cl-2,3,7,8-TCDD		82.5	(35%-197%)
11473001	17J0274-01 EA-2-12	13C-2,3,7,8-TCDD		80.4	(37%-137%)
		37Cl-2,3,7,8-TCDD		79.4	(42%-164%)
11473002	17J0274-02 EA-2-24	13C-2,3,7,8-TCDD		84.0	(37%-137%)
		37Cl-2,3,7,8-TCDD		86.9	(42%-164%)
11473003	17J0274-03 EA-4-12	13C-2,3,7,8-TCDD		81.2	(37%-137%)
		37Cl-2,3,7,8-TCDD		80.9	(42%-164%)
11473004	17J0274-04 EA-4-24	13C-2,3,7,8-TCDD		81.2	(37%-137%)
		37Cl-2,3,7,8-TCDD		80.6	(42%-164%)

* Recovery outside Acceptance Limits
# Column to be used to flag recovery values
D Sample Diluted

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number: 17J0274
Client ID: LCS for batch 35991
Lab Sample ID: 12019848
Instrument: HRP750
Analyst: MJC

Sample Type: Laboratory Control Sample
Matrix: SOIL
Analysis Date: 10/27/2017 06:50
Dilution: 1
Prep Batch ID: 35991
Batch ID: 35993

CAS No.		Parmname	Amount Added pg/g	Spike Conc. pg/g	Recovery %	Acceptance Limits
1746-01-6	LCS	2,3,7,8-TCDD	20.0	21.9	110	67-158

Hi-Res Dioxins/Furans

Quality Control Summary
Spike Recovery Report

SDG Number: 17J0274
Client ID: LCSD for batch 35991
Lab Sample ID: 12019849
Instrument: HRP750
Analyst: MJC

Sample Type: Laboratory Control Sample Duplicate
Matrix: SOIL
Analysis Date: 10/27/2017 07:36
Dilution: 1
Prep Batch ID: 35991
Batch ID: 35993

CAS No.		Parmname	Amount Added pg/g	Spike Conc. pg/g	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
1746-01-6	LCSD	2,3,7,8-TCDD	20.0	20.0	99.8	67-158	9.37	0-20

Method Blank Summary

SDG Number:	**17J0274**	**Client:**	**AWSL001**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 35991**	**Instrument ID:**	**HRP750**	**Data File:**	**A26OCT17E_3-3**
Lab Sample ID:	**12019847**	**Prep Date:**	**23-OCT-17**	**Analyzed:**	**10/27/17 08:23**
Column:					

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 35991	12019848	A26OCT17E_3-1	10/27/17	0650
02	LCSD for batch 35991	12019849	A26OCT17E_3-2	10/27/17	0736
03	17J0274-01 EA-2-12	11473001	A26OCT17E_3-10	10/27/17	1351
04	17J0274-02 EA-2-24	11473002	A26OCT17E_3-11	10/27/17	1438
05	17J0274-03 EA-4-12	11473003	A26OCT17E_3-12	10/27/17	1525
06	17J0274-04 EA-4-24	11473004	A26OCT17E_3-13	10/27/17	1612

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0274**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**12019847**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 35991**				
Client ID:	**MB for batch 35991**			**Prep Basis:**	**As Received**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 08:23**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-3**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD	U	1	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		150	200	pg/g	74.8	(25%-164%)
37Cl-2,3,7,8-TCDD		16.5	20.0	pg/g	82.5	(35%-197%)

Comments:

K **Estimated Maximum Possible Concentration**

U **Analyte was analyzed for, but not detected above the specified detection limit.**

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0274**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**12019848**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 35991**				
Client ID:	**LCS for batch 35991**			**Prep Basis:**	**As Received**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 06:50**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-1**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD		21.9	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		161	200	pg/g	80.3	(20%-175%)
37Cl-2,3,7,8-TCDD		18.0	20.0	pg/g	89.8	(31%-191%)

Comments:

U Analyte was analyzed for, but not detected above the specified detection limit.

Hi-Res Dioxins/Furans
Certificate of Analysis
Sample Summary

SDG Number:	**17J0274**	**Client:**	**AWSL001**	**Project:**	**AWSL00110**
Lab Sample ID:	**12019849**			**Matrix:**	**SOIL**
Client Sample:	**QC for batch 35991**				
Client ID:	**LCSD for batch 35991**			**Prep Basis:**	**As Received**
Batch ID:	**35993**	**Method:**	**EPA Method 1613B**		
Run Date:	**10/27/2017 07:36**	**Analyst:**	**MJC**	**Instrument:**	**HRP750**
Data File:	**A26OCT17E_3-2**			**Dilution:**	**1**
Prep Batch:	**35991**	**Prep Method:**	**SW846 3540C**		
Prep Date:	**23-OCT-17**	**Prep Aliquot:**	**10 g**		

CAS No.	Parmname	Qual	Result	Units	PQL
1746-01-6	2,3,7,8-TCDD		20.0	pg/g	1.00

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-2,3,7,8-TCDD		147	200	pg/g	73.5	(20%-175%)
37Cl-2,3,7,8-TCDD		16.8	20.0	pg/g	84.0	(31%-191%)

Comments:

U **Analyte was analyzed for, but not detected above the specified detection limit.**

Final Lab Results (Air Water & Soil)

TCLP –Black Gravel & Soil

Grab Sample ID's

EA – 1–TCLP

EA – 2–TCLP

EA – 3–TCLP

EA – 4–TCLP

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 17J0277

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro, GA 30830	Date Received:	October 6, 2017 17:20
		Date Issued:	October 20, 2017 14:56
		Project Number:	R15434R-12
Submitted To:	Thomas Liesfeld	Purchase Order:	
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria		

Enclosed are the results of analyses for samples received by the laboratory on 10/06/2017 17:20. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

Ted Soyars

Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

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Supplier Diversity Strengthens the Commonwealth
by the Virginia Department of Minority Business Enterprise

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 17J0277

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EA-1-TCLP	17J0277-01	Soil	10/06/2017 11:30	10/06/2017 17:20
EA-2-TCLP	17J0277-02	Soil	10/06/2017 11:00	10/06/2017 17:20
EA-3-TCLP	17J0277-03	Soil	10/06/2017 10:30	10/06/2017 17:20
EA-4-TCLP	17J0277-04	Soil	10/06/2017 10:00	10/06/2017 17:20

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Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0277

Analytical Results

Sample I.D. EA-1-TCLP **Laboratory Sample ID:** 17J0277-01

Grab Date/Time: 10/06/2017 11:30

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Metals by 6000/7000 Series Methods									
TCLP Silver	01	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:26	CWO
TCLP Arsenic	01	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:26	CWO
TCLP Barium	01	SW6010C	<5.00 mg/L		5.00	1	10/10/17 07:30	10/10/17 14:26	CWO
TCLP Cadmium	01	SW6010C	<0.0400 mg/L		0.0400	1	10/10/17 07:30	10/10/17 14:26	CWO
TCLP Chromium	01	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:26	CWO
TCLP Mercury	01	SW7470A	<0.008 mg/L		0.008	1	10/10/17 08:20	10/10/17 13:50	RCV
TCLP Lead	01	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:26	CWO
TCLP Selenium	01	SW6010C	**0.266 mg/L**		0.250	1	10/10/17 07:30	10/10/17 14:26	CWO
TCLP Extraction Fluid, Metals	01	SW1311	**1 #**		--	1	10/09/17 14:30	10/10/17 07:41	RCV
TCLP Volatile Organic Compounds by GCMS									
TCLP Extraction Fluid, ZHE	01	SW1311	**1 #**		--	1	10/09/17 15:00	10/10/17 09:04	KCS
TCLP 1,1-Dichloroethylene	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP 1,2-Dichloroethane	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP 1,4-Dichlorobenzene	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP 2-Butanone (MEK)	01	SW8260B	<0.20 mg/L		0.20	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Benzene	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Carbon tetrachloride	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Chlorobenzene	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Chloroform	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Tetrachloroethylene (PCE)	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Trichloroethylene	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Vinyl chloride	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
Surr: 1,2-Dichloroethane-d4 (Surr)	*01*	*SW8260B*	*106 %*		*70-120*		*10/10/17 00:00*	*10/10/17 10:21*	*JDW*

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0277

Analytical Results

Sample I.D. EA-1-TCLP **Laboratory Sample ID:** 17J0277-01

Grab Date/Time: 10/06/2017 11:30

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	*01*	*SW8260B*	*95.2 %*		*75-120*		*10/10/17 00:00*	*10/10/17 10:21*	*JDW*
Surr: Dibromofluoromethane (Surr)	*01*	*SW8260B*	*101 %*		*80-119*		*10/10/17 00:00*	*10/10/17 10:21*	*JDW*
Surr: Toluene-d8 (Surr)	*01*	*SW8260B*	*100 %*		*85-120*		*10/10/17 00:00*	*10/10/17 10:21*	*JDW*
TCLP Semivolatile Organic Compounds									
TCLP Extraction Fluid, SV Organics	01	SW1311	**1 #**		--	1	10/11/17 14:48	10/11/17 14:48	PMP
TCLP Semivolatile Organic Compounds by GCMS									
TCLP 2,4,5-Trichlorophenol	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP 2,4,6-Trichlorophenol	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP 2,4-Dinitrotoluene	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP Hexachlorobenzene	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP Hexachlorobutadiene	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP Hexachloroethane	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP m+p-Cresols	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP Nitrobenzene	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP o+m+p-Cresols	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP o-Cresol	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP Pentachlorophenol	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP Pyridine	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
Surr: 2,4,6-Tribromophenol (Surr)	*01*	*SW8270D*	*57.6 %*		*20-86*		*10/13/17 09:13*	*10/13/17 20:39*	*SKS*
Surr: 2-Fluorobiphenyl (Surr)	*01*	*SW8270D*	*50.2 %*		*23-87*		*10/13/17 09:13*	*10/13/17 20:39*	*SKS*
Surr: 2-Fluorophenol (Surr)	*01*	*SW8270D*	*18.9 %*		*10-52*		*10/13/17 09:13*	*10/13/17 20:39*	*SKS*
Surr: Nitrobenzene-d5 (Surr)	*01*	*SW8270D*	*48.7 %*		*10-98.5*		*10/13/17 09:13*	*10/13/17 20:39*	*SKS*
Surr: Phenol-d5 (Surr)	*01*	*SW8270D*	*11.8 %*		*5-33*		*10/13/17 09:13*	*10/13/17 20:39*	*SKS*

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0277

Analytical Results

Sample I.D. EA-1-TCLP **Laboratory Sample ID:** 17J0277-01

Grab Date/Time: 10/06/2017 11:30

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Semivolatile Organic Compounds by GCMS									
Surr: p-Terphenyl-d14 (Surr)	*01*	*SW8270D*	*65.3 %*		*27-133*		*10/13/17 09:13*	*10/13/17 20:39*	*SKS*
TCLP Organochlorine Herbicides by GC/ECD									
TCLP 2,4,5-TP (Silvex)	01	SW8151A	<0.0005 mg/L		0.0005	1	10/17/17 14:43	10/19/17 01:50	CVH
TCLP 2,4-D	01	SW8151A	<0.001 mg/L		0.001	1	10/17/17 14:43	10/19/17 01:50	CVH
Surr: DCAA (Surr)	*01*	*SW8151A*	*130 %*	*S*	*60-112*		*10/17/17 14:43*	*10/19/17 01:50*	*CVH*
TCLP Organochlorine Pesticides and PCBs by GC/ECD									
TCLP Chlordane	01	SW8081B	<0.030 mg/L		0.030	1	10/17/17 13:01	10/17/17 13:01	LBH
TCLP Endrin	01	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:01	10/17/17 13:01	LBH
TCLP gamma-BHC (Lindane)	01	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:01	10/17/17 13:01	LBH
TCLP Heptachlor	01	SW8081B	<0.005 mg/L	C	0.005	1	10/17/17 13:01	10/17/17 13:01	LBH
TCLP Heptachlor Epoxide	01	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:01	10/17/17 13:01	LBH
TCLP Methoxychlor	01	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:01	10/17/17 13:01	LBH
TCLP Toxaphene	01	SW8081B	<0.500 mg/L		0.500	1	10/17/17 13:01	10/17/17 13:01	LBH
Surr: TCMX	*01*	*SW8081B*	*60.0 %*		*18-112*		*10/17/17 13:01*	*10/17/17 13:01*	*LBH*
Surr: DCB	*01*	*SW8081B*	*85.0 %*		*27-131*		*10/17/17 13:01*	*10/17/17 13:01*	*LBH*

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Final Report

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0277

Analytical Results

Sample I.D. EA-2-TCLP **Laboratory Sample ID:** 17J0277-02

Grab Date/Time: 10/06/2017 11:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Metals by 6000/7000 Series Methods									
TCLP Silver	02	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Arsenic	02	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Barium	02	SW6010C	<5.00 mg/L		5.00	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Cadmium	02	SW6010C	<0.0400 mg/L		0.0400	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Chromium	02	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Mercury	02	SW7470A	<0.008 mg/L		0.008	1	10/10/17 08:20	10/10/17 13:52	RCV
TCLP Lead	02	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Selenium	02	SW6010C	<0.250 mg/L		0.250	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Extraction Fluid, Metals	02	SW1311	**1 #**		--	1	10/09/17 14:30	10/10/17 07:41	RCV
TCLP Volatile Organic Compounds by GCMS									
TCLP Extraction Fluid, ZHE	02	SW1311	**1 #**		--	1	10/09/17 15:00	10/10/17 09:04	KCS
TCLP 1,1-Dichloroethylene	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP 1,2-Dichloroethane	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP 1,4-Dichlorobenzene	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP 2-Butanone (MEK)	02	SW8260B	<0.20 mg/L		0.20	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Benzene	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Carbon tetrachloride	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Chlorobenzene	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Chloroform	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Tetrachloroethylene (PCE)	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Trichloroethylene	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Vinyl chloride	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
Surr: 1,2-Dichloroethane-d4 (Surr)	*02*	*SW8260B*	*103 %*		*70-120*		*10/10/17 00:00*	*10/10/17 10:45*	*JDW*

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0277

Analytical Results

Sample I.D. EA-2-TCLP **Laboratory Sample ID:** 17J0277-02

Grab Date/Time: 10/06/2017 11:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	*02*	*SW8260B*	*93.7 %*		*75-120*		*10/10/17 00:00*	*10/10/17 10:45*	*JDW*
Surr: Dibromofluoromethane (Surr)	*02*	*SW8260B*	*99.5 %*		*80-119*		*10/10/17 00:00*	*10/10/17 10:45*	*JDW*
Surr: Toluene-d8 (Surr)	*02*	*SW8260B*	*101 %*		*85-120*		*10/10/17 00:00*	*10/10/17 10:45*	*JDW*
TCLP Semivolatile Organic Compounds									
TCLP Extraction Fluid, SV Organics	02	SW1311	**1 #**		--	1	10/11/17 14:48	10/11/17 14:48	PMP
TCLP Semivolatile Organic Compounds by GCMS									
TCLP 2,4,5-Trichlorophenol	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP 2,4,6-Trichlorophenol	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP 2,4-Dinitrotoluene	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP Hexachlorobenzene	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP Hexachlorobutadiene	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP Hexachloroethane	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP m+p-Cresols	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP Nitrobenzene	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP o+m+p-Cresols	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP o-Cresol	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP Pentachlorophenol	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP Pyridine	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
Surr: 2,4,6-Tribromophenol (Surr)	*02*	*SW8270D*	*88.4 %*	*S*	*20-86*		*10/13/17 09:13*	*10/13/17 21:12*	*SKS*
Surr: 2-Fluorobiphenyl (Surr)	*02*	*SW8270D*	*65.7 %*		*23-87*		*10/13/17 09:13*	*10/13/17 21:12*	*SKS*
Surr: 2-Fluorophenol (Surr)	*02*	*SW8270D*	*26.3 %*		*10-52*		*10/13/17 09:13*	*10/13/17 21:12*	*SKS*
Surr: Nitrobenzene-d5 (Surr)	*02*	*SW8270D*	*65.4 %*		*10-98.5*		*10/13/17 09:13*	*10/13/17 21:12*	*SKS*
Surr: Phenol-d5 (Surr)	*02*	*SW8270D*	*29.2 %*		*5-33*		*10/13/17 09:13*	*10/13/17 21:12*	*SKS*

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0277

Analytical Results

Sample I.D. EA-2-TCLP **Laboratory Sample ID:** 17J0277-02

Grab Date/Time: 10/06/2017 11:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Semivolatile Organic Compounds by GCMS									
Surr: p-Terphenyl-d14 (Surr)	*02*	*SW8270D*	*69.7 %*		*27-133*		*10/13/17 09:13*	*10/13/17 21:12*	*SKS*
TCLP Organochlorine Herbicides by GC/ECD									
TCLP 2,4,5-TP (Silvex)	02	SW8151A	<0.0005 mg/L		0.0005	1	10/17/17 14:43	10/19/17 02:12	CVH
TCLP 2,4-D	02	SW8151A	<0.001 mg/L		0.001	1	10/17/17 14:43	10/19/17 02:12	CVH
Surr: DCAA (Surr)	*02*	*SW8151A*	*100 %*		*60-112*		*10/17/17 14:43*	*10/19/17 02:12*	*CVH*
TCLP Organochlorine Pesticides and PCBs by GC/ECD									
TCLP Chlordane	02	SW8081B	<0.030 mg/L		0.030	1	10/17/17 13:18	10/17/17 13:18	LBH
TCLP Endrin	02	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:18	10/17/17 13:18	LBH
TCLP gamma-BHC (Lindane)	02	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:18	10/17/17 13:18	LBH
TCLP Heptachlor	02	SW8081B	<0.005 mg/L	C	0.005	1	10/17/17 13:18	10/17/17 13:18	LBH
TCLP Heptachlor Epoxide	02	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:18	10/17/17 13:18	LBH
TCLP Methoxychlor	02	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:18	10/17/17 13:18	LBH
TCLP Toxaphene	02	SW8081B	<0.500 mg/L		0.500	1	10/17/17 13:18	10/17/17 13:18	LBH
Surr: TCMX	*02*	*SW8081B*	*55.0 %*		*18-112*		*10/17/17 13:18*	*10/17/17 13:18*	*LBH*
Surr: DCB	*02*	*SW8081B*	*80.0 %*		*27-131*		*10/17/17 13:18*	*10/17/17 13:18*	*LBH*

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0277

Analytical Results

Sample I.D. EA-3-TCLP **Laboratory Sample ID:** 17J0277-03

Grab Date/Time: 10/06/2017 10:30

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Metals by 6000/7000 Series Methods									
TCLP Silver	03	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:38	CWO
TCLP Arsenic	03RE1	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/11/17 13:56	BG
TCLP Barium	03	SW6010C	<5.00 mg/L		5.00	1	10/10/17 07:30	10/10/17 14:38	CWO
TCLP Cadmium	03	SW6010C	<0.0400 mg/L		0.0400	1	10/10/17 07:30	10/10/17 14:38	CWO
TCLP Chromium	03	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:38	CWO
TCLP Mercury	03	SW7470A	<0.008 mg/L		0.008	1	10/10/17 08:20	10/10/17 13:53	RCV
TCLP Lead	03	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:38	CWO
TCLP Selenium	03	SW6010C	<0.250 mg/L		0.250	1	10/10/17 07:30	10/10/17 14:38	CWO
TCLP Extraction Fluid, Metals	03	SW1311	**1 #**		--	1	10/09/17 14:30	10/10/17 07:41	RCV
TCLP Volatile Organic Compounds by GCMS									
TCLP Extraction Fluid, ZHE	03	SW1311	**1 #**		--	1	10/09/17 15:00	10/10/17 09:04	KCS
TCLP 1,1-Dichloroethylene	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP 1,2-Dichloroethane	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP 1,4-Dichlorobenzene	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP 2-Butanone (MEK)	03	SW8260B	<0.20 mg/L		0.20	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Benzene	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Carbon tetrachloride	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Chlorobenzene	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Chloroform	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Tetrachloroethylene (PCE)	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Trichloroethylene	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Vinyl chloride	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
Surr: 1,2-Dichloroethane-d4 (Surr)	*03*	*SW8260B*	*98.9 %*		*70-120*		*10/10/17 00:00*	*10/10/17 11:08*	*JDW*

AIR WATER & SOIL LABORATORIES, INC.

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0277

Analytical Results

Sample I.D. EA-3-TCLP **Laboratory Sample ID:** 17J0277-03

Grab Date/Time: 10/06/2017 10:30

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	*03*	*SW8260B*	*94.3 %*		*75-120*		*10/10/17 00:00*	*10/10/17 11:08*	*JDW*
Surr: Dibromofluoromethane (Surr)	*03*	*SW8260B*	*97.7 %*		*80-119*		*10/10/17 00:00*	*10/10/17 11:08*	*JDW*
Surr: Toluene-d8 (Surr)	*03*	*SW8260B*	*102 %*		*85-120*		*10/10/17 00:00*	*10/10/17 11:08*	*JDW*
TCLP Semivolatile Organic Compounds									
TCLP Extraction Fluid, SV Organics	03	SW1311	**1 #**		--	1	10/11/17 14:48	10/11/17 14:48	PMP
TCLP Semivolatile Organic Compounds by GCMS									
TCLP 2,4,5-Trichlorophenol	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP 2,4,6-Trichlorophenol	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP 2,4-Dinitrotoluene	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP Hexachlorobenzene	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP Hexachlorobutadiene	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP Hexachloroethane	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP m+p-Cresols	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP Nitrobenzene	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP o+m+p-Cresols	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP o-Cresol	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP Pentachlorophenol	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP Pyridine	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
Surr: 2,4,6-Tribromophenol (Surr)	*03*	*SW8270D*	*48.2 %*		*20-86*		*10/13/17 09:13*	*10/13/17 21:44*	*SKS*
Surr: 2-Fluorobiphenyl (Surr)	*03*	*SW8270D*	*43.8 %*		*23-87*		*10/13/17 09:13*	*10/13/17 21:44*	*SKS*
Surr: 2-Fluorophenol (Surr)	*03*	*SW8270D*	*17.6 %*		*10-52*		*10/13/17 09:13*	*10/13/17 21:44*	*SKS*
Surr: Nitrobenzene-d5 (Surr)	*03*	*SW8270D*	*44.2 %*		*10-98.5*		*10/13/17 09:13*	*10/13/17 21:44*	*SKS*
Surr: Phenol-d5 (Surr)	*03*	*SW8270D*	*20.6 %*		*5-33*		*10/13/17 09:13*	*10/13/17 21:44*	*SKS*

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0277

Analytical Results

Sample I.D. EA-3-TCLP **Laboratory Sample ID:** 17J0277-03

Grab Date/Time: 10/06/2017 10:30

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Semivolatile Organic Compounds by GCMS									
Surr: p-Terphenyl-d14 (Surr)	*03*	*SW8270D*	*54.3 %*		*27-133*		*10/13/17 09:13*	*10/13/17 21:44*	*SKS*
TCLP Organochlorine Herbicides by GC/ECD									
TCLP 2,4,5-TP (Silvex)	03	SW8151A	<0.0005 mg/L		0.0005	1	10/17/17 14:43	10/19/17 02:34	CVH
TCLP 2,4-D	03	SW8151A	<0.001 mg/L		0.001	1	10/17/17 14:43	10/19/17 02:34	CVH
Surr: DCAA (Surr)	*03*	*SW8151A*	*95.0 %*		*60-112*		*10/17/17 14:43*	*10/19/17 02:34*	*CVH*
TCLP Organochlorine Pesticides and PCBs by GC/ECD									
TCLP Chlordane	03	SW8081B	<0.030 mg/L		0.030	1	10/17/17 13:36	10/17/17 13:36	LBH
TCLP Endrin	03	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:36	10/17/17 13:36	LBH
TCLP gamma-BHC (Lindane)	03	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:36	10/17/17 13:36	LBH
TCLP Heptachlor	03	SW8081B	<0.005 mg/L	C	0.005	1	10/17/17 13:36	10/17/17 13:36	LBH
TCLP Heptachlor Epoxide	03	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:36	10/17/17 13:36	LBH
TCLP Methoxychlor	03	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:36	10/17/17 13:36	LBH
TCLP Toxaphene	03	SW8081B	<0.500 mg/L		0.500	1	10/17/17 13:36	10/17/17 13:36	LBH
Surr: TCMX	*03*	*SW8081B*	*55.0 %*		*18-112*		*10/17/17 13:36*	*10/17/17 13:36*	*LBH*
Surr: DCB	*03*	*SW8081B*	*80.0 %*		*27-131*		*10/17/17 13:36*	*10/17/17 13:36*	*LBH*

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0277

Analytical Results

Sample I.D. EA-4-TCLP **Laboratory Sample ID:** 17J0277-04

Grab Date/Time: 10/06/2017 10:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Metals by 6000/7000 Series Methods									
TCLP Silver	04	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Arsenic	04	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Barium	04	SW6010C	<5.00 mg/L		5.00	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Cadmium	04	SW6010C	<0.0400 mg/L		0.0400	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Chromium	04	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Mercury	04	SW7470A	<0.008 mg/L		0.008	1	10/10/17 08:20	10/10/17 14:00	RCV
TCLP Lead	04	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Selenium	04	SW6010C	<0.250 mg/L		0.250	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Extraction Fluid, Metals	04	SW1311	**1 #**		--	1	10/09/17 14:30	10/10/17 07:41	RCV
TCLP Volatile Organic Compounds by GCMS									
TCLP Extraction Fluid, ZHE	04	SW1311	**1 #**		--	1	10/09/17 15:00	10/10/17 09:04	KCS
TCLP 1,1-Dichloroethylene	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP 1,2-Dichloroethane	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP 1,4-Dichlorobenzene	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP 2-Butanone (MEK)	04	SW8260B	<0.20 mg/L		0.20	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Benzene	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Carbon tetrachloride	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Chlorobenzene	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Chloroform	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Tetrachloroethylene (PCE)	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Trichloroethylene	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Vinyl chloride	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
Surr: 1,2-Dichloroethane-d4 (Surr)	*04*	*SW8260B*	*97.9 %*		*70-120*		*10/10/17 00:00*	*10/10/17 11:31*	*JDW*

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0277

Analytical Results

Sample I.D. EA-4-TCLP **Laboratory Sample ID:** 17J0277-04

Grab Date/Time: 10/06/2017 10:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	*04*	*SW8260B*	*95.6 %*		*75-120*		*10/10/17 00:00*	*10/10/17 11:31*	*JDW*
Surr: Dibromofluoromethane (Surr)	*04*	*SW8260B*	*96.2 %*		*80-119*		*10/10/17 00:00*	*10/10/17 11:31*	*JDW*
Surr: Toluene-d8 (Surr)	*04*	*SW8260B*	*103 %*		*85-120*		*10/10/17 00:00*	*10/10/17 11:31*	*JDW*
TCLP Semivolatile Organic Compounds									
TCLP Extraction Fluid, SV Organics	04	SW1311	**1 #**		--	1	10/11/17 14:48	10/11/17 14:48	PMP
TCLP Semivolatile Organic Compounds by GCMS									
TCLP 2,4,5-Trichlorophenol	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP 2,4,6-Trichlorophenol	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP 2,4-Dinitrotoluene	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP Hexachlorobenzene	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP Hexachlorobutadiene	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP Hexachloroethane	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP m+p-Cresols	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP Nitrobenzene	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP o+m+p-Cresols	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP o-Cresol	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP Pentachlorophenol	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP Pyridine	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
Surr: 2,4,6-Tribromophenol (Surr)	*04*	*SW8270D*	*95.0 %*	*S*	*20-86*		*10/13/17 09:13*	*10/13/17 22:16*	*SKS*
Surr: 2-Fluorobiphenyl (Surr)	*04*	*SW8270D*	*72.7 %*		*23-87*		*10/13/17 09:13*	*10/13/17 22:16*	*SKS*
Surr: 2-Fluorophenol (Surr)	*04*	*SW8270D*	*35.6 %*		*10-52*		*10/13/17 09:13*	*10/13/17 22:16*	*SKS*
Surr: Nitrobenzene-d5 (Surr)	*04*	*SW8270D*	*73.3 %*		*10-98.5*		*10/13/17 09:13*	*10/13/17 22:16*	*SKS*
Surr: Phenol-d5 (Surr)	*04*	*SW8270D*	*35.9 %*	*S*	*5-33*		*10/13/17 09:13*	*10/13/17 22:16*	*SKS*

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Laboratory Order ID: 17J0277

Analytical Results

Sample I.D. EA-4-TCLP **Laboratory Sample ID:** 17J0277-04

Grab Date/Time: 10/06/2017 10:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
TCLP Semivolatile Organic Compounds by GCMS									
Surr: p-Terphenyl-d14 (Surr)	*04*	*SW8270D*	*72.8 %*		*27-133*		*10/13/17 09:13*	*10/13/17 22:16*	*SKS*
TCLP Organochlorine Herbicides by GC/ECD									
TCLP 2,4,5-TP (Silvex)	04	SW8151A	<0.0005 mg/L		0.0005	1	10/17/17 14:43	10/19/17 02:56	CVH
TCLP 2,4-D	04	SW8151A	<0.001 mg/L		0.001	1	10/17/17 14:43	10/19/17 02:56	CVH
Surr: DCAA (Surr)	*04*	*SW8151A*	*90.0 %*		*60-112*		*10/17/17 14:43*	*10/19/17 02:56*	*CVH*
TCLP Organochlorine Pesticides and PCBs by GC/ECD									
TCLP Chlordane	04	SW8081B	<0.030 mg/L		0.030	1	10/17/17 13:53	10/17/17 13:53	LBH
TCLP Endrin	04	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:53	10/17/17 13:53	LBH
TCLP gamma-BHC (Lindane)	04	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:53	10/17/17 13:53	LBH
TCLP Heptachlor	04	SW8081B	<0.005 mg/L	C	0.005	1	10/17/17 13:53	10/17/17 13:53	LBH
TCLP Heptachlor Epoxide	04	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:53	10/17/17 13:53	LBH
TCLP Methoxychlor	04	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:53	10/17/17 13:53	LBH
TCLP Toxaphene	04	SW8081B	<0.500 mg/L		0.500	1	10/17/17 13:53	10/17/17 13:53	LBH
Surr: TCMX	*04*	*SW8081B*	*45.0 %*		*18-112*		*10/17/17 13:53*	*10/17/17 13:53*	*LBH*
Surr: DCB	*04*	*SW8081B*	*70.0 %*		*27-131*		*10/17/17 13:53*	*10/17/17 13:53*	*LBH*

AIR WATER & SOIL LABORATORIES, INC.

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Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Analytical Summary

Preparation Method:

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Metals by 6000/7000 Series Methods		**Preparation Method:**	**SW1311 Metals**		
17J0277-01	100 g / 2000 mL	SW1311	BAJ0252	SAJ0235	
17J0277-02	100 g / 2000 mL	SW1311	BAJ0252	SAJ0235	
17J0277-03	100 g / 2000 mL	SW1311	BAJ0252	SAJ0235	
17J0277-04	100 g / 2000 mL	SW1311	BAJ0252	SAJ0235	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Semivolatile Organic Compounds		**Preparation Method:**	**SW1311 SVOC**		
17J0277-01	100 mL / 2000 mL	SW1311	BAJ0619	SAJ0536	AI70063
17J0277-02	100 mL / 2000 mL	SW1311	BAJ0619	SAJ0536	AI70063
17J0277-03	100 mL / 2000 mL	SW1311	BAJ0619	SAJ0536	AI70063
17J0277-04	100 mL / 2000 mL	SW1311	BAJ0619	SAJ0536	AI70063

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Volatile Organic Compounds by GCMS		**Preparation Method:**	**SW1311 ZHE**		
17J0277-01	15.0 g / 300 mL	SW1311	BAJ0259	SAJ0240	AJ70012
17J0277-02	15.0 g / 300 mL	SW1311	BAJ0259	SAJ0240	AJ70012
17J0277-03	15.0 g / 300 mL	SW1311	BAJ0259	SAJ0240	AJ70012
17J0277-04	15.0 g / 300 mL	SW1311	BAJ0259	SAJ0240	AJ70012

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Metals by 6000/7000 Series Methods		**Preparation Method:**	**SW3010A**		
17J0277-01	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0270	AJ70045
17J0277-01RE1	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0306	AJ70051
17J0277-02	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0270	AJ70045
17J0277-03	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0270	AJ70045
17J0277-03RE1	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0306	AJ70051

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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
17J0277-04	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0270	AJ70045
17J0277-04RE1	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0306	AJ70051

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Semivolatile Organic Compounds by GCMS		**Preparation Method:**	**SW3510C**		
17J0277-01	100 mL / 1.00 mL	SW8270D	BAJ0399	SAJ0368	AI70063
17J0277-02	100 mL / 1.00 mL	SW8270D	BAJ0399	SAJ0368	AI70063
17J0277-03	100 mL / 1.00 mL	SW8270D	BAJ0399	SAJ0368	AI70063
17J0277-04	100 mL / 1.00 mL	SW8270D	BAJ0399	SAJ0368	AI70063
TCLP Organochlorine Pesticides and PCBs by GC/ECD		**Preparation Method:**	**SW3510C**		
17J0277-01	100 mL / 1.00 mL	SW8081B	BAJ0443	SAJ0459	AI70117
17J0277-02	100 mL / 1.00 mL	SW8081B	BAJ0443	SAJ0459	AI70117
17J0277-03	100 mL / 1.00 mL	SW8081B	BAJ0443	SAJ0459	AI70117
17J0277-04	100 mL / 1.00 mL	SW8081B	BAJ0443	SAJ0459	AI70117
TCLP Organochlorine Herbicides by GC/ECD		**Preparation Method:**	**SW3510C**		
17J0277-01	100 mL / 5.00 mL	SW8151A	BAJ0497	SAJ0513	AJ70086
17J0277-02	100 mL / 5.00 mL	SW8151A	BAJ0497	SAJ0513	AJ70086
17J0277-03	100 mL / 5.00 mL	SW8151A	BAJ0497	SAJ0513	AJ70086
17J0277-04	100 mL / 5.00 mL	SW8151A	BAJ0497	SAJ0513	AJ70086

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Volatile Organic Compounds by GCMS		**Preparation Method:**	**SW5030B**		
17J0277-01	0.250 mL / 5.00 mL	SW8260B	BAJ0324	SAJ0290	AI70017
17J0277-02	0.250 mL / 5.00 mL	SW8260B	BAJ0324	SAJ0290	AI70017
17J0277-03	0.250 mL / 5.00 mL	SW8260B	BAJ0324	SAJ0290	AI70017
17J0277-04	0.250 mL / 5.00 mL	SW8260B	BAJ0324	SAJ0290	AI70017

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Metals by 6000/7000 Series Methods		**Preparation Method:**	**SW7470A**		
17J0277-01	1.00 mL / 20.0 mL	SW7470A	BAJ0255	SAJ0255	AJ70044
17J0277-02	1.00 mL / 20.0 mL	SW7470A	BAJ0255	SAJ0255	AJ70044

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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
17J0277-03	1.00 mL / 20.0 mL	SW7470A	BAJ0255	SAJ0255	AJ70044
17J0277-04	1.00 mL / 20.0 mL	SW7470A	BAJ0255	SAJ0255	AJ70044

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TCLP Metals by 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0252 - SW1311 Metals										
Blank (BAJ0252-BLK1)				Prepared: 10/09/2017 Analyzed: 10/10/2017						
Extraction Fluid, Metals	2 #	0	#							
Blank (BAJ0252-BLK2)				Prepared: 10/09/2017 Analyzed: 10/10/2017						
Extraction Fluid, Metals	1 #	0	#							
Batch BAJ0253 - SW3010A										
Blank (BAJ0253-BLK1)				Prepared & Analyzed: 10/10/2017						
Arsenic	<0.100 mg/L	0.100	mg/L							
Barium	<5.00 mg/L	5.00	mg/L							
Cadmium	<0.0400 mg/L	0.0400	mg/L							
Chromium	<0.100 mg/L	0.100	mg/L							
Lead	<0.100 mg/L	0.100	mg/L							
Selenium	<0.250 mg/L	0.250	mg/L							
Silver	<0.100 mg/L	0.100	mg/L							
LCS (BAJ0253-BS1)				Prepared & Analyzed: 10/10/2017						
Arsenic	2.60 mg/L	0.100	mg/L	2.50	mg/L	104	80-120			
Barium	<5.00 mg/L	5.00	mg/L	2.50	mg/L	106	80-120			
Cadmium	2.64 mg/L	0.0400	mg/L	2.50	mg/L	105	80-120			
Chromium	2.65 mg/L	0.100	mg/L	2.50	mg/L	106	80-120			
Lead	2.60 mg/L	0.100	mg/L	2.50	mg/L	104	80-120			
Selenium	2.56 mg/L	0.250	mg/L	2.50	mg/L	103	80-120			
Silver	0.517 mg/L	0.100	mg/L	0.500	mg/L	103	80-120			
LCS Dup (BAJ0253-BSD1)				Prepared & Analyzed: 10/10/2017						
Arsenic	2.58 mg/L	0.100	mg/L	2.50	mg/L	103	80-120	0.989	20	
Barium	<5.00 mg/L	5.00	mg/L	2.50	mg/L	106	80-120	0.194	20	
Cadmium	2.63 mg/L	0.0400	mg/L	2.50	mg/L	105	80-120	0.190	20	
Chromium	2.64 mg/L	0.100	mg/L	2.50	mg/L	106	80-120	0.326	20	
Lead	2.57 mg/L	0.100	mg/L	2.50	mg/L	103	80-120	1.40	20	
Selenium	2.47 mg/L	0.250	mg/L	2.50	mg/L	98.8	80-120	3.74	20	

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TCLP Metals by 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0253 - SW3010A										
LCS Dup (BAJ0253-BSD1)				Prepared & Analyzed: 10/10/2017						
Silver	0.519 mg/L	0.100	mg/L	0.500	mg/L	104	80-120	0.365	20	
Matrix Spike (BAJ0253-MS1)		Source: 17J0277-03		Prepared & Analyzed: 10/10/2017						
Arsenic	2.69 mg/L	0.100	mg/L	2.50	0.103 mg/L	103	75-125			
Barium	<5.00 mg/L	5.00	mg/L	2.50	<5.00 mg/L	115	75-125			
Cadmium	2.58 mg/L	0.0400	mg/L	2.50	<0.0400 mg/L	103	75-125			
Chromium	2.61 mg/L	0.100	mg/L	2.50	<0.100 mg/L	104	75-125			
Lead	2.53 mg/L	0.100	mg/L	2.50	<0.100 mg/L	101	75-125			
Selenium	2.71 mg/L	0.250	mg/L	2.50	<0.250 mg/L	108	75-125			
Silver	0.526 mg/L	0.100	mg/L	0.500	<0.100 mg/L	105	75-125			
Matrix Spike Dup (BAJ0253-MSD1)		Source: 17J0277-03		Prepared & Analyzed: 10/10/2017						
Arsenic	2.65 mg/L	0.100	mg/L	2.50	0.103 mg/L	102	75-125	1.46	20	
Barium	<5.00 mg/L	5.00	mg/L	2.50	<5.00 mg/L	114	75-125	0.421	20	
Cadmium	2.59 mg/L	0.0400	mg/L	2.50	<0.0400 mg/L	104	75-125	0.343	20	
Chromium	2.62 mg/L	0.100	mg/L	2.50	<0.100 mg/L	105	75-125	0.292	20	
Lead	2.53 mg/L	0.100	mg/L	2.50	<0.100 mg/L	101	75-125	0.154	20	
Selenium	2.69 mg/L	0.250	mg/L	2.50	<0.250 mg/L	108	75-125	0.842	20	
Silver	0.527 mg/L	0.100	mg/L	0.500	<0.100 mg/L	105	75-125	0.267	20	
Batch BAJ0255 - SW7470A										
Blank (BAJ0255-BLK1)				Prepared & Analyzed: 10/10/2017						
Mercury	<0.008 mg/L	0.008	mg/L							
LCS (BAJ0255-BS1)				Prepared & Analyzed: 10/10/2017						
Mercury	0.052 mg/L	0.008	mg/L	0.0500	mg/L	103	80-120			

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TCLP Metals by 6000/7000 Series Methods - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0255 - SW7470A										
LCS Dup (BAJ0255-BSD1)				Prepared & Analyzed: 10/10/2017						
Mercury	0.050 mg/L	0.008	mg/L	0.0500 mg/L		100	80-120	3.13	20	
Matrix Spike (BAJ0255-MS1)		**Source: 17J0277-03**		Prepared & Analyzed: 10/10/2017						
Mercury	0.050 mg/L	0.008	mg/L	0.0500	<0.008 mg/L	100	80-120			
Matrix Spike Dup (BAJ0255-MSD1)		**Source: 17J0277-03**		Prepared & Analyzed: 10/10/2017						
Mercury	0.051 mg/L	0.008	mg/L	0.0500	<0.008 mg/L	102	80-120	1.24	20	

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TCLP Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0259 - SW1311 ZHE										
Blank (BAJ0259-BLK1)				Prepared: 10/09/2017 Analyzed: 10/10/2017						
Extraction Fluid, ZHE	1 #	0	#							
Batch BAJ0324 - SW5030B										
Blank (BAJ0324-BLK1)				Prepared & Analyzed: 10/10/2017						
1,1-Dichloroethylene	<0.02 mg/L	0.02	mg/L							
1,2-Dichloroethane	<0.02 mg/L	0.02	mg/L							
1,4-Dichlorobenzene	<0.02 mg/L	0.02	mg/L							
2-Butanone (MEK)	<0.20 mg/L	0.20	mg/L							
Benzene	<0.02 mg/L	0.02	mg/L							
Carbon tetrachloride	<0.02 mg/L	0.02	mg/L							
Chlorobenzene	<0.02 mg/L	0.02	mg/L							
Chloroform	<0.02 mg/L	0.02	mg/L							
Tetrachloroethylene (PCE)	<0.02 mg/L	0.02	mg/L							
Trichloroethylene	<0.02 mg/L	0.02	mg/L							
Vinyl chloride	<0.02 mg/L	0.02	mg/L							
Surr: 1,2-Dichloroethane-d4 (Surr)	1.03		mg/L	1.00		103	70-120			
Surr: 4-Bromofluorobenzene (Surr)	0.946		mg/L	1.00		94.6	75-120			
Surr: Dibromofluoromethane (Surr)	0.994		mg/L	1.00		99.4	80-119			
Surr: Toluene-d8 (Surr)	1.01		mg/L	1.00		101	85-120			
LCS (BAJ0324-BS1)				Prepared & Analyzed: 10/10/2017						
1,1-Dichloroethylene	39.8 ug/L	20	ug/L	50.0	ug/L	79.5	70-130			
1,2-Dichloroethane	44.8 ug/L	20	ug/L	50.0	ug/L	89.6	70-130			
1,4-Dichlorobenzene	44.1 ug/L	20	ug/L	50.0	ug/L	88.2	75-125			
2-Butanone (MEK)	< 200 ug/L	200	ug/L	50.0	ug/L	87.4	30-150			
Benzene	43.0 ug/L	20	ug/L	50.0	ug/L	86.0	80-120			
Carbon tetrachloride	42.2 ug/L	20	ug/L	50.0	ug/L	84.5	65-140			
Chlorobenzene	42.8 ug/L	20	ug/L	50.0	ug/L	85.7	80-120			
Chloroform	42.5 ug/L	20	ug/L	50.0	ug/L	84.9	65-135			
Tetrachloroethylene (PCE)	57.0 ug/L	20	ug/L	50.0	ug/L	114	45-150			

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TCLP Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0324 - SW5030B										
LCS (BAJ0324-BS1)				Prepared & Analyzed: 10/10/2017						
Trichloroethylene	42.0 ug/L	20	ug/L	50.0	ug/L	84.0	70-125			
Vinyl chloride	34.5 ug/L	20	ug/L	50.0	ug/L	69.0	50-145			
Surr: 1,2-Dichloroethane-d4 (Surr)	1.04		mg/L	1.00	mg/L	104	70-120			
Surr: 4-Bromofluorobenzene (Surr)	0.960		mg/L	1.00	mg/L	96.0	75-120			
Surr: Dibromofluoromethane (Surr)	0.990		mg/L	1.00	mg/L	99.0	80-119			
Surr: Toluene-d8 (Surr)	0.999		mg/L	1.00	mg/L	99.9	85-120			
Matrix Spike (BAJ0324-MS1)		**Source: 17J0277-04**		Prepared & Analyzed: 10/10/2017						
1,1-Dichloroethylene	41.1 ug/L	20	ug/L	50.0	< 20 ug/L	82.2	70-130			
1,2-Dichloroethane	43.7 ug/L	20	ug/L	50.0	< 20 ug/L	87.4	70-130			
1,4-Dichlorobenzene	44.1 ug/L	20	ug/L	50.0	< 20 ug/L	88.2	75-125			
2-Butanone (MEK)	< 200 ug/L	200	ug/L	50.0	< 200 ug/L	83.2	30-150			
Benzene	43.1 ug/L	20	ug/L	50.0	< 20 ug/L	86.2	80-120			
Carbon tetrachloride	42.9 ug/L	20	ug/L	50.0	< 20 ug/L	85.7	65-140			
Chlorobenzene	42.9 ug/L	20	ug/L	50.0	< 20 ug/L	85.7	80-120			
Chloroform	42.5 ug/L	20	ug/L	50.0	< 20 ug/L	84.9	65-135			
Tetrachloroethylene (PCE)	58.2 ug/L	20	ug/L	50.0	< 20 ug/L	116	45-150			
Trichloroethylene	42.2 ug/L	20	ug/L	50.0	< 20 ug/L	84.4	70-125			
Vinyl chloride	35.4 ug/L	20	ug/L	50.0	< 20 ug/L	70.8	50-145			
Surr: 1,2-Dichloroethane-d4 (Surr)	1.00		mg/L	1.00	mg/L	100	70-120			
Surr: 4-Bromofluorobenzene (Surr)	0.954		mg/L	1.00	mg/L	95.4	75-120			
Surr: Dibromofluoromethane (Surr)	1.01		mg/L	1.00	mg/L	101	80-119			
Surr: Toluene-d8 (Surr)	1.00		mg/L	1.00	mg/L	100	85-120			
Matrix Spike Dup (BAJ0324-MSD1)		**Source: 17J0277-04**		Prepared & Analyzed: 10/10/2017						
1,1-Dichloroethylene	46.0 ug/L	20	ug/L	50.0	< 20 ug/L	92.0	70-130	11.3	30	
1,2-Dichloroethane	48.2 ug/L	20	ug/L	50.0	< 20 ug/L	96.3	70-130	9.74	30	
1,4-Dichlorobenzene	50.4 ug/L	20	ug/L	50.0	< 20 ug/L	101	75-125	13.4	30	
2-Butanone (MEK)	< 200 ug/L	200	ug/L	50.0	< 200 ug/L	97.8	30-150	16.1	30	
Benzene	49.3 ug/L	20	ug/L	50.0	< 20 ug/L	98.6	80-120	13.3	30	
Carbon tetrachloride	49.5 ug/L	20	ug/L	50.0	< 20 ug/L	98.9	65-140	14.2	30	
Chlorobenzene	48.9 ug/L	20	ug/L	50.0	< 20 ug/L	97.7	80-120	13.1	30	

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

TCLP Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0324 - SW5030B										
Matrix Spike Dup (BAJ0324-MSD1)		**Source: 17J0277-04**		Prepared & Analyzed: 10/10/2017						
Chloroform	47.6 ug/L	20	ug/L	50.0	< 20 ug/L	95.1	65-135	11.3	30	
Tetrachloroethylene (PCE)	66.4 ug/L	20	ug/L	50.0	< 20 ug/L	133	45-150	13.1	30	
Trichloroethylene	49.0 ug/L	20	ug/L	50.0	< 20 ug/L	98.0	70-125	15.0	30	
Vinyl chloride	38.4 ug/L	20	ug/L	50.0	< 20 ug/L	76.9	50-145	8.22	30	
Surr: 1,2-Dichloroethane-d4 (Surr)	0.968		mg/L	1.00	mg/L	96.8	70-120			
Surr: 4-Bromofluorobenzene (Surr)	0.956		mg/L	1.00	mg/L	95.6	75-120			
Surr: Dibromofluoromethane (Surr)	0.980		mg/L	1.00	mg/L	98.0	80-119			
Surr: Toluene-d8 (Surr)	1.02		mg/L	1.00	mg/L	102	85-120			

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0399 - SW3510C										
Blank (BAJ0399-BLK1)				Prepared & Analyzed: 10/13/2017						
2,4,5-Trichlorophenol	<0.02 mg/L	0.02	mg/L							
2,4,6-Trichlorophenol	<0.02 mg/L	0.02	mg/L							
2,4-Dinitrotoluene	<0.02 mg/L	0.02	mg/L							
Hexachlorobenzene	<0.02 mg/L	0.02	mg/L							
Hexachlorobutadiene	<0.02 mg/L	0.02	mg/L							
Hexachloroethane	<0.02 mg/L	0.02	mg/L							
m+p-Cresols	<0.02 mg/L	0.02	mg/L							
Nitrobenzene	<0.02 mg/L	0.02	mg/L							
o+m+p-Cresols	<0.02 mg/L	0.02	mg/L							
o-Cresol	<0.02 mg/L	0.02	mg/L							
Pentachlorophenol	<0.02 mg/L	0.02	mg/L							
Pyridine	<0.02 mg/L	0.02	mg/L							
Surr: 2,4,6-Tribromophenol (Surr)	0.988		mg/L	1.00		98.8	20-86			S
Surr: 2-Fluorobiphenyl (Surr)	0.382		mg/L	0.500		76.3	23-87			
Surr: 2-Fluorophenol (Surr)	0.388		mg/L	1.00		38.8	10-52			
Surr: Nitrobenzene-d5 (Surr)	0.368		mg/L	0.500		73.5	10-98.5			
Surr: Phenol-d5 (Surr)	0.386		mg/L	1.00		38.6	5-33			S
Surr: p-Terphenyl-d14 (Surr)	0.365		mg/L	0.500		73.1	27-133			
LCS (BAJ0399-BS1)				Prepared & Analyzed: 10/13/2017						
1,2,4-Trichlorobenzene	0.42 mg/L	0.01	mg/L	1.00	mg/L	41.9	21.8-66.7			
1,2-Dichlorobenzene	0.43 mg/L	0.01	mg/L	1.00	mg/L	43.1	22-60			
1,3-Dichlorobenzene	0.37 mg/L	0.01	mg/L	1.00	mg/L	36.8	22-60			
1,4-Dichlorobenzene	0.41 mg/L	0.01	mg/L	1.00	mg/L	41.5	13-68			
2,4,6-Trichlorophenol	0.46 mg/L	0.02	mg/L	1.00	mg/L	46.3	50-115			L
2,4-Dichlorophenol	0.46 mg/L	0.01	mg/L	1.00	mg/L	46.5	50-105			L
2,4-Dimethylphenol	0.44 mg/L	0.0005	mg/L	1.00	mg/L	44.2	30-110			
2,4-Dinitrophenol	0.80 mg/L	0.05	mg/L	1.00	mg/L	79.8	15-140			
2,4-Dinitrotoluene	0.72 mg/L	0.02	mg/L	1.00	mg/L	71.9	21-99			
2,6-Dinitrotoluene	0.94 mg/L	0.01	mg/L	1.00	mg/L	93.7	15-140			
2-Chloronaphthalene	0.43 mg/L	0.01	mg/L	1.00	mg/L	42.7	45-105			L

AIR WATER & SOIL LABORATORIES, INC.

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Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0399 - SW3510C										
LCS (BAJ0399-BS1)				Prepared & Analyzed: 10/13/2017						
2-Chlorophenol	0.42 mg/L	0.01	mg/L	1.00	mg/L	42.3	15-74			
2-Nitrophenol	0.49 mg/L	0.01	mg/L	1.00	mg/L	49.0	40-115			
4,6-Dinitro-2-methylphenol	0.79 mg/L	0.05	mg/L	1.00	mg/L	79.2	40-130			
4-Bromophenyl phenyl ether	0.65 mg/L	0.01	mg/L	1.00	mg/L	65.5	15-110			
4-Chlorophenyl phenyl ether	0.51 mg/L	0.01	mg/L	1.00	mg/L	50.7	15-110			
4-Nitrophenol	0.30 mg/L	0.05	mg/L	1.00	mg/L	30.4	0-125			
Acenaphthene	0.45 mg/L	0.01	mg/L	1.00	mg/L	45.4	27.7-85.5			
Acenaphthylene	0.49 mg/L	0.01	mg/L	1.00	mg/L	49.0	50-105			L
Anthracene	0.72 mg/L	0.01	mg/L	1.00	mg/L	71.6	55-110			
Benzo (a) anthracene	0.77 mg/L	0.00005	mg/L	1.00	mg/L	77.1	55-110			
Benzo (a) pyrene	0.74 mg/L	0.01	mg/L	1.00	mg/L	73.9	55-110			
Benzo (b) fluoranthene	0.82 mg/L	0.01	mg/L	1.00	mg/L	81.7	45-120			
Benzo (g,h,i) perylene	0.65 mg/L	0.01	mg/L	1.00	mg/L	64.6	40-125			
Benzo (k) fluoranthene	0.73 mg/L	0.01	mg/L	1.00	mg/L	72.6	45-125			
bis (2-Chloroethoxy) methane	0.49 mg/L	0.01	mg/L	1.00	mg/L	48.8	40-125			
bis (2-Chloroethyl) ether	0.45 mg/L	0.01	mg/L	1.00	mg/L	45.4	40-125			
2,2'-Oxybis (1-chloropropane)	0.39 mg/L	0.01	mg/L	1.00	mg/L	39.4	40-125			L
bis (2-Ethylhexyl) phthalate	0.71 mg/L	0.01	mg/L	1.00	mg/L	70.6	40-125			
Butyl benzyl phthalate	0.66 mg/L	0.01	mg/L	1.00	mg/L	66.0	45-115			
Carbazole	1.04 mg/L	0.002	mg/L	1.00	mg/L	104	0-200			
Chrysene	0.78 mg/L	0.01	mg/L	1.00	mg/L	77.6	55-110			
Dibenz (a,h) anthracene	0.64 mg/L	0.01	mg/L	1.00	mg/L	64.1	40-125			
Diethyl phthalate	0.59 mg/L	0.01	mg/L	1.00	mg/L	59.4	40-120			
Dimethyl phthalate	0.53 mg/L	0.01	mg/L	1.00	mg/L	53.2	25-125			
Di-n-butyl phthalate	0.99 mg/L	0.01	mg/L	1.00	mg/L	99.0	55-115			
Di-n-octyl phthalate	0.71 mg/L	0.01	mg/L	1.00	mg/L	71.1	35-135			
Fluoranthene	0.85 mg/L	0.01	mg/L	1.00	mg/L	85.4	55-115			
Fluorene	0.53 mg/L	0.01	mg/L	1.00	mg/L	52.9	50-110			
Hexachlorobenzene	0.76 mg/L	0.02	mg/L	1.00	mg/L	76.2	25-125			
Hexachlorobutadiene	0.45 mg/L	0.02	mg/L	1.00	mg/L	44.8	25-125			
Hexachlorocyclopentadiene	0.31 mg/L	0.01	mg/L	1.00	mg/L	31.3	25-125			

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Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0399 - SW3510C										
LCS (BAJ0399-BS1)				Prepared & Analyzed: 10/13/2017						
Hexachloroethane	0.39 mg/L	0.02	mg/L	1.00	mg/L	38.8	25-125			
Indeno (1,2,3-cd) pyrene	0.65 mg/L	0.01	mg/L	1.00	mg/L	65.3	45-125			
Isophorone	0.44 mg/L	0.01	mg/L	1.00	mg/L	43.5	10-110			
Naphthalene	0.43 mg/L	0.01	mg/L	1.00	mg/L	42.6	40-100			
Nitrobenzene	0.42 mg/L	0.02	mg/L	1.00	mg/L	42.1	40-100			
n-Nitrosodimethylamine	0.21 mg/L	0.01	mg/L	1.00	mg/L	21.1	25-110			L
n-Nitrosodi-n-propylamine	0.42 mg/L	0.01	mg/L	1.00	mg/L	42.2	12-97			
n-Nitrosodiphenylamine	0.51 mg/L	0.01	mg/L	1.00	mg/L	51.3	12-97			
p-Chloro-m-cresol	0.45 mg/L	0.01	mg/L	1.00	mg/L	44.8	10-91			
Pentachlorophenol	0.82 mg/L	0.02	mg/L	1.00	mg/L	81.9	30-109			
Phenanthrene	0.74 mg/L	0.01	mg/L	1.00	mg/L	73.7	50-115			
Phenol	0.21 mg/L	0.02	mg/L	1.01	mg/L	20.6	0-115			
Pyrene	0.64 mg/L	0.01	mg/L	1.00	mg/L	63.8	27-110			
Pyridine	0.47 mg/L	0.02	mg/L	1.00	mg/L	47.1	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	0.814		mg/L	1.00	mg/L	81.4	20-86			
Surr: 2-Fluorobiphenyl (Surr)	0.212		mg/L	0.500	mg/L	42.3	23-87			
Surr: 2-Fluorophenol (Surr)	0.163		mg/L	1.00	mg/L	16.3	10-52			
Surr: Nitrobenzene-d5 (Surr)	0.216		mg/L	0.500	mg/L	43.1	10-98.5			
Surr: Phenol-d5 (Surr)	0.178		mg/L	1.00	mg/L	17.8	5-33			
Surr: p-Terphenyl-d14 (Surr)	0.334		mg/L	0.500	mg/L	66.7	27-133			
Matrix Spike (BAJ0399-MS1)		**Source: 17J0277-01**		Prepared & Analyzed: 10/13/2017						
1,2,4-Trichlorobenzene	0.71 mg/L	0.01	mg/L	1.00	<0.01 mg/L	71.0	21.8-66.7			M
1,2-Dichlorobenzene	0.73 mg/L	0.01	mg/L	1.00	<0.01 mg/L	73.3	22-60			M
1,3-Dichlorobenzene	0.62 mg/L	0.01	mg/L	1.00	<0.01 mg/L	62.2	22-60			M
1,4-Dichlorobenzene	0.69 mg/L	0.01	mg/L	1.00	<0.01 mg/L	69.2	22-60			M
2,4,6-Trichlorophenol	0.81 mg/L	0.02	mg/L	1.00	<0.02 mg/L	81.2	50-115			
2,4-Dichlorophenol	0.85 mg/L	0.01	mg/L	1.00	<0.01 mg/L	84.5	50-105			
2,4-Dimethylphenol	0.77 mg/L	0.0005	mg/L	1.00	<0.0005 mg/L	77.2	30-110			
2,4-Dinitrophenol	0.95 mg/L	0.05	mg/L	1.00	<0.05 mg/L	95.4	15-140			
2,4-Dinitrotoluene	0.81 mg/L	0.02	mg/L	1.00	<0.02 mg/L	81.3	17-111			

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Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0399 - SW3510C										
Matrix Spike (BAJ0399-MS1)		**Source: 17J0277-01**		Prepared & Analyzed: 10/13/2017						
2,6-Dinitrotoluene	1.06 mg/L	0.01	mg/L	1.00	<0.01 mg/L	106	15-140			
2-Chloronaphthalene	0.77 mg/L	0.01	mg/L	1.00	<0.01 mg/L	77.3	45-105			
2-Chlorophenol	0.74 mg/L	0.01	mg/L	1.00	<0.01 mg/L	73.8	19-64			M
2-Nitrophenol	0.86 mg/L	0.01	mg/L	1.00	<0.01 mg/L	85.5	40-115			
4,6-Dinitro-2-methylphenol	0.88 mg/L	0.05	mg/L	1.00	<0.05 mg/L	88.4	40-130			
4-Bromophenyl phenyl ether	0.85 mg/L	0.01	mg/L	1.00	<0.01 mg/L	84.8	15-110			
4-Chlorophenyl phenyl ether	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.0	15-110			
4-Nitrophenol	0.38 mg/L	0.05	mg/L	1.00	<0.05 mg/L	37.7	0-125			
Acenaphthene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	77.8	24-90			
Acenaphthylene	0.84 mg/L	0.01	mg/L	1.00	<0.01 mg/L	83.7	50-105			
Anthracene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.5	55-110			
Benzo (a) anthracene	0.81 mg/L	0.00005	mg/L	1.00	<0.00005 mg/L	81.4	55-110			
Benzo (a) pyrene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.0	55-110			
Benzo (b) fluoranthene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.4	45-120			
Benzo (g,h,i) perylene	0.77 mg/L	0.01	mg/L	1.00	<0.01 mg/L	77.5	40-125			
Benzo (k) fluoranthene	0.82 mg/L	0.01	mg/L	1.00	<0.01 mg/L	82.0	45-125			
bis (2-Chloroethoxy) methane	0.85 mg/L	0.01	mg/L	1.00	<0.01 mg/L	85.0	40-125			
bis (2-Chloroethyl) ether	0.79 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.7	40-125			
2,2'-Oxybis (1-chloropropane)	0.67 mg/L	0.01	mg/L	1.00	<0.01 mg/L	66.5	40-125			
bis (2-Ethylhexyl) phthalate	0.67 mg/L	0.01	mg/L	1.00	<0.01 mg/L	66.9	40-125			
Butyl benzyl phthalate	0.66 mg/L	0.01	mg/L	1.00	<0.01 mg/L	66.1	45-115			
Carbazole	1.10 mg/L	0.002	mg/L	1.00	<0.002 mg/L	110	0-200			
Chrysene	0.75 mg/L	0.01	mg/L	1.00	<0.01 mg/L	74.8	55-110			
Dibenz (a,h) anthracene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	77.9	40-125			
Diethyl phthalate	0.72 mg/L	0.01	mg/L	1.00	<0.01 mg/L	71.8	40-120			
Dimethyl phthalate	0.73 mg/L	0.01	mg/L	1.00	<0.01 mg/L	73.1	25-125			
Di-n-butyl phthalate	1.06 mg/L	0.01	mg/L	1.00	<0.01 mg/L	106	55-115			
Di-n-octyl phthalate	0.66 mg/L	0.01	mg/L	1.00	<0.01 mg/L	66.0	35-135			
Fluoranthene	0.85 mg/L	0.01	mg/L	1.00	<0.01 mg/L	85.1	55-115			
Fluorene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.0	50-110			
Hexachlorobenzene	0.87 mg/L	0.02	mg/L	1.00	<0.02 mg/L	87.2	25-125			

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TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0399 - SW3510C										
Matrix Spike (BAJ0399-MS1)	**Source: 17J0277-01**			Prepared & Analyzed: 10/13/2017						
Hexachlorobutadiene	0.77 mg/L	0.02	mg/L	1.00	<0.02 mg/L	77.5	25-125			
Hexachlorocyclopentadiene	0.64 mg/L	0.01	mg/L	1.00	<0.01 mg/L	63.9	25-125			
Hexachloroethane	0.70 mg/L	0.02	mg/L	1.00	<0.02 mg/L	69.7	25-125			
Indeno (1,2,3-cd) pyrene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	77.8	45-125			
Isophorone	0.79 mg/L	0.01	mg/L	1.00	<0.01 mg/L	79.2	10-110			
Naphthalene	0.70 mg/L	0.01	mg/L	1.00	<0.01 mg/L	70.2	40-100			
Nitrobenzene	0.75 mg/L	0.02	mg/L	1.00	<0.02 mg/L	74.6	40-100			
n-Nitrosodimethylamine	0.85 mg/L	0.01	mg/L	1.00	<0.01 mg/L	84.7	25-110			
n-Nitrosodi-n-propylamine	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	77.5	12-97			
n-Nitrosodiphenylamine	0.63 mg/L	0.01	mg/L	1.00	<0.01 mg/L	62.8	12-97			
p-Chloro-m-cresol	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.1	10-91			
Pentachlorophenol	0.89 mg/L	0.02	mg/L	1.00	<0.02 mg/L	88.8	27-109			
Phenanthrene	0.80 mg/L	0.01	mg/L	1.00	<0.01 mg/L	80.4	50-115			
Phenol	0.35 mg/L	0.02	mg/L	1.01	<0.02 mg/L	34.8	0-115			
Pyrene	0.67 mg/L	0.01	mg/L	1.00	<0.01 mg/L	66.9	23-110			
Pyridine	0.81 mg/L	0.02	mg/L	1.00	<0.02 mg/L	81.3	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	0.935		mg/L	1.00	mg/L	93.5	20-86			S
Surr: 2-Fluorobiphenyl (Surr)	0.363		mg/L	0.500	mg/L	72.5	23-87			
Surr: 2-Fluorophenol (Surr)	0.367		mg/L	1.00	mg/L	36.7	10-52			
Surr: Nitrobenzene-d5 (Surr)	0.374		mg/L	0.500	mg/L	74.7	10-98.5			
Surr: Phenol-d5 (Surr)	0.349		mg/L	1.00	mg/L	34.9	5-33			S
Surr: p-Terphenyl-d14 (Surr)	0.333		mg/L	0.500	mg/L	66.5	27-133			
Matrix Spike Dup (BAJ0399-MSD1)	**Source: 17J0277-01**			Prepared & Analyzed: 10/13/2017						
1,2,4-Trichlorobenzene	0.39 mg/L	0.01	mg/L	1.00	<0.01 mg/L	39.3	21.8-66.7	57.5	20	P
1,2-Dichlorobenzene	0.40 mg/L	0.01	mg/L	1.00	<0.01 mg/L	39.9	22-60	59.0	20	P
1,3-Dichlorobenzene	0.34 mg/L	0.01	mg/L	1.00	<0.01 mg/L	34.2	22-60	58.3	20	P
1,4-Dichlorobenzene	0.38 mg/L	0.01	mg/L	1.00	<0.01 mg/L	37.9	22-60	58.5	20	P
2,4,6-Trichlorophenol	0.45 mg/L	0.02	mg/L	1.00	<0.02 mg/L	45.0	50-115	57.3	20	M, P
2,4-Dichlorophenol	0.46 mg/L	0.01	mg/L	1.00	<0.01 mg/L	46.2	50-105	58.6	20	M, P
2,4-Dimethylphenol	0.43 mg/L	0.0005	mg/L	1.00	<0.0005 mg/L	43.0	30-110	56.8	20	P

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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0399 - SW3510C										
Matrix Spike Dup (BAJ0399-MSD1)		**Source: 17J0277-01**		Prepared & Analyzed: 10/13/2017						
2,4-Dinitrophenol	0.69 mg/L	0.05	mg/L	1.00	<0.05 mg/L	68.7	15-140	32.6	20	P
2,4-Dinitrotoluene	0.55 mg/L	0.02	mg/L	1.00	<0.02 mg/L	54.8	17-111	39.0	20	P
2,6-Dinitrotoluene	0.71 mg/L	0.01	mg/L	1.00	<0.01 mg/L	71.1	15-140	39.5	20	P
2-Chloronaphthalene	0.42 mg/L	0.01	mg/L	1.00	<0.01 mg/L	42.2	45-105	58.8	20	M, P
2-Chlorophenol	0.41 mg/L	0.01	mg/L	1.00	<0.01 mg/L	41.0	19-64	57.0	20	P
2-Nitrophenol	0.47 mg/L	0.01	mg/L	1.00	<0.01 mg/L	47.0	40-115	58.1	20	P
4,6-Dinitro-2-methylphenol	0.62 mg/L	0.05	mg/L	1.00	<0.05 mg/L	62.2	40-130	34.8	20	P
4-Bromophenyl phenyl ether	0.57 mg/L	0.01	mg/L	1.00	<0.01 mg/L	57.2	15-110	39.0	20	P
4-Chlorophenyl phenyl ether	0.48 mg/L	0.01	mg/L	1.00	<0.01 mg/L	47.6	15-110	48.3	20	P
4-Nitrophenol	0.23 mg/L	0.05	mg/L	1.00	<0.05 mg/L	23.5	0-125	46.5	20	P
Acenaphthene	0.44 mg/L	0.01	mg/L	1.00	<0.01 mg/L	43.9	24-90	55.8	20	P
Acenaphthylene	0.47 mg/L	0.01	mg/L	1.00	<0.01 mg/L	47.3	50-105	55.6	20	M, P
Anthracene	0.56 mg/L	0.01	mg/L	1.00	<0.01 mg/L	56.2	55-110	33.1	20	P
Benzo (a) anthracene	0.56 mg/L	0.00005	mg/L	1.00	<0.00005 mg/L	56.3	55-110	36.5	20	P
Benzo (a) pyrene	0.54 mg/L	0.01	mg/L	1.00	<0.01 mg/L	53.6	55-110	37.0	20	M, P
Benzo (b) fluoranthene	0.54 mg/L	0.01	mg/L	1.00	<0.01 mg/L	54.0	45-120	36.9	20	P
Benzo (g,h,i) perylene	0.49 mg/L	0.01	mg/L	1.00	<0.01 mg/L	48.8	40-125	45.5	20	P
Benzo (k) fluoranthene	0.57 mg/L	0.01	mg/L	1.00	<0.01 mg/L	56.8	45-125	36.3	20	P
bis (2-Chloroethoxy) methane	0.47 mg/L	0.01	mg/L	1.00	<0.01 mg/L	46.7	40-125	58.1	20	P
bis (2-Chloroethyl) ether	0.43 mg/L	0.01	mg/L	1.00	<0.01 mg/L	42.9	40-125	58.9	20	P
2,2'-Oxybis (1-chloropropane)	0.37 mg/L	0.01	mg/L	1.00	<0.01 mg/L	36.6	40-125	58.1	20	M, P
bis (2-Ethylhexyl) phthalate	0.48 mg/L	0.01	mg/L	1.00	<0.01 mg/L	48.4	40-125	32.1	20	P
Butyl benzyl phthalate	0.47 mg/L	0.01	mg/L	1.00	<0.01 mg/L	47.4	45-115	33.1	20	P
Carbazole	0.77 mg/L	0.002	mg/L	1.00	<0.002 mg/L	76.8	0-200	35.1	20	P
Chrysene	0.54 mg/L	0.01	mg/L	1.00	<0.01 mg/L	53.6	55-110	33.0	20	M, P
Dibenz (a,h) anthracene	0.50 mg/L	0.01	mg/L	1.00	<0.01 mg/L	50.3	40-125	43.0	20	P
Diethyl phthalate	0.49 mg/L	0.01	mg/L	1.00	<0.01 mg/L	48.7	40-120	38.3	20	P
Dimethyl phthalate	0.47 mg/L	0.01	mg/L	1.00	<0.01 mg/L	47.3	25-125	42.8	20	P
Di-n-butyl phthalate	0.62 mg/L	0.01	mg/L	1.00	<0.01 mg/L	61.9	55-115	52.6	20	P
Di-n-octyl phthalate	0.47 mg/L	0.01	mg/L	1.00	<0.01 mg/L	47.3	35-135	33.1	20	P
Fluoranthene	0.61 mg/L	0.01	mg/L	1.00	<0.01 mg/L	61.4	55-115	32.5	20	P

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TCLP Semivolatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0399 - SW3510C										
Matrix Spike Dup (BAJ0399-MSD1)		**Source: 17J0277-01**		Prepared & Analyzed: 10/13/2017						
Fluorene	0.49 mg/L	0.01	mg/L	1.00	<0.01 mg/L	48.9	50-110	45.9	20	M, P
Hexachlorobenzene	0.62 mg/L	0.02	mg/L	1.00	<0.02 mg/L	61.9	25-125	33.9	20	P
Hexachlorobutadiene	0.41 mg/L	0.02	mg/L	1.00	<0.02 mg/L	41.4	25-125	60.7	20	P
Hexachlorocyclopentadiene	0.30 mg/L	0.01	mg/L	1.00	<0.01 mg/L	29.9	25-125	72.6	20	P
Hexachloroethane	0.35 mg/L	0.02	mg/L	1.00	<0.02 mg/L	35.1	25-125	66.1	20	P
Indeno (1,2,3-cd) pyrene	0.50 mg/L	0.01	mg/L	1.00	<0.01 mg/L	49.9	45-125	43.8	20	P
Isophorone	0.43 mg/L	0.01	mg/L	1.00	<0.01 mg/L	42.8	10-110	59.7	20	P
Naphthalene	0.40 mg/L	0.01	mg/L	1.00	<0.01 mg/L	39.8	40-100	55.4	20	M, P
Nitrobenzene	0.41 mg/L	0.02	mg/L	1.00	<0.02 mg/L	40.7	40-100	58.8	20	P
n-Nitrosodimethylamine	0.25 mg/L	0.01	mg/L	1.00	<0.01 mg/L	24.7	25-110	110	20	M, P
n-Nitrosodi-n-propylamine	0.41 mg/L	0.01	mg/L	1.00	<0.01 mg/L	40.7	12-97	62.3	20	P
n-Nitrosodiphenylamine	0.43 mg/L	0.01	mg/L	1.00	<0.01 mg/L	42.6	12-97	38.4	20	P
p-Chloro-m-cresol	0.44 mg/L	0.01	mg/L	1.00	<0.01 mg/L	43.5	10-91	56.9	20	P
Pentachlorophenol	0.63 mg/L	0.02	mg/L	1.00	<0.02 mg/L	62.9	27-109	34.1	20	P
Phenanthrene	0.58 mg/L	0.01	mg/L	1.00	<0.01 mg/L	58.2	50-115	32.1	20	P
Phenol	0.19 mg/L	0.02	mg/L	1.01	<0.02 mg/L	19.3	0-115	57.3	20	P
Pyrene	0.48 mg/L	0.01	mg/L	1.00	<0.01 mg/L	48.4	23-110	32.0	20	P
Pyridine	0.17 mg/L	0.02	mg/L	1.00	<0.02 mg/L	17.4	0-200	130	20	P
Surr: 2,4,6-Tribromophenol (Surr)	0.655		mg/L	1.00	mg/L	65.5	20-86			
Surr: 2-Fluorobiphenyl (Surr)	0.194		mg/L	0.500	mg/L	38.9	23-87			
Surr: 2-Fluorophenol (Surr)	0.191		mg/L	1.00	mg/L	19.1	10-52			
Surr: Nitrobenzene-d5 (Surr)	0.206		mg/L	0.500	mg/L	41.2	10-98.5			
Surr: Phenol-d5 (Surr)	0.196		mg/L	1.00	mg/L	19.6	5-33			
Surr: p-Terphenyl-d14 (Surr)	0.236		mg/L	0.500	mg/L	47.1	27-133			

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Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

TCLP Organochlorine Herbicides by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0497 - SW3510C										
Blank (BAJ0497-BLK1)				Prepared: 10/17/2017 Analyzed: 10/18/2017						
2,4,5-TP (Silvex)	<0.0005 mg/L	0.0005	mg/L							
2,4-D	<0.001 mg/L	0.001	mg/L							
Surr: DCAA (Surr)	0.0105		mg/L	0.0100		105	60-112			
Blank (BAJ0497-BLK2)				Prepared: 10/17/2017 Analyzed: 10/18/2017						
2,4,5-TP (Silvex)	<0.0005 mg/L	0.0005	mg/L							
2,4-D	<0.001 mg/L	0.001	mg/L							
Surr: DCAA (Surr)	0.00850		mg/L	0.0100		85.0	60-112			
LCS (BAJ0497-BS1)				Prepared: 10/17/2017 Analyzed: 10/18/2017						
2,4,5-TP (Silvex)	0.004 mg/L	0.0005	mg/L	0.00500 mg/L		80.0	52-129			
2,4-D	0.004 mg/L	0.001	mg/L	0.00500 mg/L		90.0	53-126			
Surr: DCAA (Surr)	0.0100		mg/L	0.0100 mg/L		100	60-112			
Matrix Spike (BAJ0497-MS1)		**Source: 17J0489-01**		Prepared: 10/17/2017 Analyzed: 10/19/2017						
2,4,5-TP (Silvex)	0.004 mg/L	0.0005	mg/L	0.00500	<0.0005 mg/L	90.0	52-129			
2,4-D	0.004 mg/L	0.001	mg/L	0.00500	<0.001 mg/L	90.0	53-126			
Surr: DCAA (Surr)	0.00650		mg/L	0.0100 mg/L		65.0	60-112			
Matrix Spike Dup (BAJ0497-MSD1)		**Source: 17J0489-01**		Prepared: 10/17/2017 Analyzed: 10/19/2017						
2,4,5-TP (Silvex)	0.005 mg/L	0.0005	mg/L	0.00500	<0.0005 mg/L	100	52-129	10.5	20	
2,4-D	0.006 mg/L	0.001	mg/L	0.00500	<0.001 mg/L	110	53-126	20.0	20	
Surr: DCAA (Surr)	0.0125		mg/L	0.0100 mg/L		125	60-112			S

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TCLP Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0443 - SW3510C										
Blank (BAJ0443-BLK1)				Prepared & Analyzed: 10/17/2017						
Chlordane	<0.030 mg/L	0.030	mg/L							
Endrin	<0.005 mg/L	0.005	mg/L							
gamma-BHC (Lindane)	<0.005 mg/L	0.005	mg/L							
Heptachlor	<0.005 mg/L	0.005	mg/L							
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L							
Methoxychlor	<0.005 mg/L	0.005	mg/L							
Toxaphene	<0.500 mg/L	0.500	mg/L							
Surr: TCMX	0.00160		mg/L	0.00200		80.0	18-112			
Surr: DCB	0.00180		mg/L	0.00200		90.0	27-131			
LCS (BAJ0443-BS1)				Prepared & Analyzed: 10/17/2017						
Endrin	<0.005 mg/L	0.005	mg/L	0.00100 mg/L		90.0	23-134			
Heptachlor	<0.005 mg/L	0.005	mg/L	0.00100 mg/L		60.0	23-134			
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L	0.00100 mg/L		70.0	23-134			
Methoxychlor	<0.005 mg/L	0.005	mg/L	0.00100 mg/L		90.0	23-134			
Surr: TCMX	0.00130		mg/L	0.00200 mg/L		65.0	18-112			
Surr: DCB	0.00150		mg/L	0.00200 mg/L		75.0	27-131			
LCS (BAJ0443-BS2)				Prepared & Analyzed: 10/17/2017						
Toxaphene	<0.500 mg/L	0.500	mg/L	0.0250 mg/L		62.4	23-134			
Surr: TCMX	0.00100		mg/L	0.00200 mg/L		50.0	18-112			
Surr: DCB	0.00110		mg/L	0.00200 mg/L		55.0	27-131			
LCS (BAJ0443-BS3)				Prepared & Analyzed: 10/17/2017						
Chlordane	<0.030 mg/L	0.030	mg/L	0.0250 mg/L		63.6	23-134			
Surr: TCMX	0.00110		mg/L	0.00200 mg/L		55.0	18-112			
Surr: DCB	0.00110		mg/L	0.00200 mg/L		55.0	27-131			

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TCLP Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BAJ0443 - SW3510C										
Matrix Spike (BAJ0443-MS1)		**Source: 17J0277-04**		Prepared & Analyzed: 10/17/2017						
Endrin	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	70.0	23-134			
Heptachlor	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	50.0	23-134			
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	60.0	23-134			
Methoxychlor	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	80.0	23-134			
Surr: TCMX	0.00110		mg/L	0.00200	mg/L	55.0	18-112			
Surr: DCB	0.00140		mg/L	0.00200	mg/L	70.0	27-131			
Matrix Spike Dup (BAJ0443-MSD1)		**Source: 17J0277-04**		Prepared & Analyzed: 10/17/2017						
Endrin	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	80.0	23-134	13.3	20	
Heptachlor	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	60.0	23-134	18.2	20	
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	60.0	23-134	0.00	20	
Methoxychlor	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	80.0	23-134	0.00	20	
Surr: TCMX	0.00110		mg/L	0.00200	mg/L	55.0	18-112			
Surr: DCB	0.00150		mg/L	0.00200	mg/L	75.0	27-131			

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Certified Analyses included in this Report

Analyte	Certifications
SW1311 in Non-Potable Water	
Extraction Fluid, SV Organics	VELAP
SW1311 in Solids	
Extraction Fluid, Metals	VELAP
Extraction Fluid, ZHE	VELAP
SW6010C in Non-Potable Water	
Arsenic	VELAP,WVDEP
Barium	VELAP,WVDEP
Cadmium	VELAP,WVDEP
Chromium	VELAP,WVDEP
Lead	VELAP,WVDEP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
SW7470A in Non-Potable Water	
Mercury	VELAP,WVDEP
SW8081B in Non-Potable Water	
Chlordane	VELAP
Endrin	VELAP
gamma-BHC (Lindane)	VELAP
Heptachlor	VELAP
Heptachlor Epoxide	VELAP
Methoxychlor	VELAP
Toxaphene	VELAP
SW8151A in Non-Potable Water	
2,4,5-TP (Silvex)	VELAP
2,4-D	VELAP
SW8260B in Non-Potable Water	
1,1-Dichloroethylene	NC,VELAP
1,2-Dichloroethane	NC,VELAP
1,4-Dichlorobenzene	NC,VELAP
2-Butanone (MEK)	NC,VELAP
Benzene	NC,VELAP
Carbon tetrachloride	NC,VELAP
Chlorobenzene	NC,VELAP
Chloroform	NC,VELAP
Tetrachloroethylene (PCE)	NC,VELAP

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Certified Analyses included in this Report

Analyte	Certifications
Trichloroethylene	NC,VELAP
Vinyl chloride	NC,VELAP
SW8270D in Non-Potable Water	
2,4,6-Trichlorophenol	VELAP
2,4-Dinitrotoluene	VELAP
Hexachlorobenzene	VELAP
Hexachlorobutadiene	VELAP
Hexachloroethane	VELAP
Nitrobenzene	VELAP
o-Cresol	VELAP
Pentachlorophenol	VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2017
NC	North Carolina DENR	495	12/31/2017
PADEP	NELAC-Pennsylvania	001	10/31/2017
VELAP	NELAC-Virginia Certificate #9439	460021	06/14/2018
WVDEP	West Virginia DEP	350	11/30/2017

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Summary of Data Qualifiers

C	Continuing calibarion verification response for this analyte is outside specifications.
L	LCS recovery is outside of established acceptance limits
M	Matrix spike recovery is outside established acceptance limits
P	Duplicate analysis does not meet the acceptance criteria for precision
S	Surrogate recovery was outside acceptance criteria
RPD	Relative Percent Difference
Qual	Qualifers
-RE	Denotes sample was re-analyzed
D.F.	Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
PCBs, Total	Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

CLIENT:	LIESFELD FARMS	CONSULTANT:	DRAPER ADEN ASSOCIATES	COPY COA TO CONSULTANT?	YES
ATTN:	THOMAS LIESFELD	ATTN:	WILLIAM A SALOMONE (WSALOMONE@DAA.COM)	COPY INVOICE TO CONSULTANT?	YES
STREET:	859 BEN HATCHER ROAD	STREET:	8090 VILLA PARK DRIVE	PROJECT:	NKWP / WEANACK LAND RECLAMATION CRITERIA
CITY:	WAYNESBORO, GA 30830	CITY:	RICHMOND, VIRGINIA 23228	LOCATION:	NEW KENT, VIRGINIA
PHONE:	804-833-4286	PHONE:	804-264-2228	LABORATORY:	AIR, WATER, & SOIL LABORATORIES
TURN AROUND:	STANDARD	P.O. #:	R15434R-12		

ANALYSES REQUESTED

LAB USE ONLY	SAMPLE INFORMATION 10/6/17			COMPOSITE	NO. OF JARS	MATRIX	~~see attached table (exclusion criteria column only)~~ Full TCLP						COMMENTS (SAMPLING INTERVAL)
LAB ID	SAMPLE ID	DATE	TIME										
	EA-1-TCLP		11:30	X	1	S	X						~~1-12 INCHES~~
	EA-2-TCLP		11:00	X	1	S	X						~~12-24 INCHES~~
	EA-3-TCLP		1030	X	1	S	X						
	EA-4-TCLP		1600	X	1	S	X						~~PLEASE HOLD TCLP SOILS - PENDING ANALYSIS ON FIRST RUN~~

SAMPLED BY: Bradley Fitzwater

PRINTED NAME: Bradley Fitzwater

NOTES: Level 2 data package.
Please report all concentrations in mg/kg (dry weight).
All dry weight analyses shall be total analysis.

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME	REASON FOR TRANSPORT
Bradley Fitzwater	10/6/17	17:20	[illegible]	10/6/17	17:20	TO LABORATORY OF CHEMICAL ANALYSIS

TEMP: 1.3°C pH: CONTENTS: A = AIR; S=SOIL; G=GROUNDWATER; WW=WASTEWATER

Sealed On Ice

Draper Aden Associates
Engineering • Surveying • Environmental Services
8090 Villa Park Drive
Richmond, Virginia 23228
(804) 264-2228 • Fax (804) 264-8773
www.daa.com

Thomas Liesfeld 17J0277
Weanack Dredge Material Screenin
Recd: 10/06/2017 Due: 10/20/2017
v130325002

1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

Sample Conditions Checklist

Samples Received at:	**1.30°C**
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	Yes
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments